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Hall, William Whitty

COUGHS AND COLDS;

OR, THE

PREVENTION, CAUSE, AND CURE OF VARIOUS AFFECTIONS OF THE

THROAT;

WITH CASES, ILLUSTRATING THE REMARKABLE EFFICACY OF

OUT-DOOR ACTIVITY

AND

HORSEBACK EXERCISE,

IN PERMANENTLY ARRESTING THE PROGRESS OF DISEASES OF THE

CHEST.

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PREFACE.

MULTITUDES have had coughs and colds at intervals for a long life-time, and at death their lungs have been found perfectly healthy; yet, of all who die a natural death, one in every six has a cough arising from a diseased condition of the lungs. This cough originates in a tickling sensation at the little hollow at the bottom of the neck in front.

Sometimes this tickling disappears of itself in a week, a day, an hour. Sometimes it lasts a score or two of years, as in bronchitis, without seeming to shorten life. Then again, if it always comes on in the morning, not necessarily at other times, with two or three other symptoms, it means consumption begun, and death within two years, on an average.

The object of this book is to show how to ascertain the character of these ticklings in the throat, in their beginnings, and to point out the unmedicinal means of alleviation eradication, and cure, in all curable cases.

PART I.

COUGHS AND COLDS.

TICKLING IN THE THROAT

ALWAYS precedes death by common consumption of the lungs in about two years, on an average; but this tickling is not always followed by consumption. Common prudence then suggests that in every case of tickling in the throat, which seems to be at the little hollow at the lower part of the windpipe, or just above the top of the breast-bone — especially if such a sensation is more or less decided for days and weeks, at intervals — an effort should be made to ascertain its character, and to use safe and judicious means for its removal.

It would not be safe practice to use means to destroy the sensation of tickling, merely

smothering the symptom, while the cause of it was in operation. Shutting up the hatches of a ship, to prevent the escape of smoke, while the hold is on fire, does not quench the flame, though it may seem to some to do so.

It would not be judicious to apply a remedy to the tickling spot when the cause of the sensation was a foot or two away in a different organ of the body. Both these positions will be better understood by enumerating some of the causes of the tickling in the throat:

1. If a man laughs heartily there will sometimes be such a hasty, urgent tickling as to make the cessation of laughter imperative.

2. Persons in robust health will cough violently on retiring to bed, the tickling being occasioned by lying with the hands or arms uncovered, thus cooling the skin, contracting the pores, and driving in upon the lungs, to oppress and irritate, what should more naturally have had an exit from the body in the shape of insensible perspiration through the skin; as soon as the arms are covered up and have had time to become healthfully warm on the surface, the tickling ceases and the cough disappears.

Suppose that paregoric, laudanum, or any other of the thousand and one remedies for coughs, colds, and consumption should be given to an extent sufficient to dull the sensation of tickling, as any anodyne would do, the cough would cease for a while, but the cause being in operation, the skin would become colder and colder, tending to produce before the morning an attack of pleurisy, lung fever, or dangerous hemorrhage.

3. Many a person has gone to bed at night to be waked up in a few minutes with a cough, which would continue for hours, most effectually preventing sleep; irritating the mind, making the body more and more restless; the cough meanwhile growing more and more annoying until there is first gagging, and finally vomiting of everything eaten at the last meal, and in ten minutes the person will be sound asleep and remain so until the morning. On inquiry, it will be found that the food was thrown up almost unchanged, except that it was "as sour as vinegar;" in other words, it was undigested. The person had eaten too

much, or too fast, or had taken something which the stomach could not work up.

Suppose an anodyne, or a "trochee," or a "tablet" had been taken, to an extent sufficient to remove the tickling or to smother the cough; the undigested food which caused the tickling would have remained in the stomach, becoming more and more sour and noxious, until nature, outraged, brought spasms, convulsions, or apoplexy to relieve herself. This is a

STOMACH COUGH,

requiring the removal of its contents by an emetic, and not such remedies as would merely smother up the sensation of tickling, which, although felt at the bottom of the throat, was caused by a certain condition of things in the stomach a foot or two distant; much in the same manner as the tingling or numbness is felt at the ends of the fingers sometimes, when a blow has been given at the elbow. There is a nerve with two branches, one of which goes to the stomach, the other to the throat and lungs, and in certain conditions, when one branch is in a

suffering condition, the other is more or less affected; and this is what physicians sometimes mean when they speak of the relative condition of two parts as being in "sympathy."

4. Many have experienced the sensation, and know very well the meaning of the expression which we very often hear, of a

CRUMB GOING THE WRONG WAY,

induced by a particle of food or drop of water going into the windpipe and down to the top of the lungs, instead of being passed into the stomach; this misdirection being occasioned by attempting to breathe at the instant of swallowing; in this case, Nature sets up a violent and irrepressible tickling in the throat, the object of which is to excite cough, which is a violent expulsion of air through the branches of the windpipe down among the lungs, and through the windpipe itself, in the hope, as it were, that the offending particle may be thrown out of the system. Here Nature originates her own mode of cure — excites a cough. Some-

times the particle is so large that the cougn cannot dislodge it ; then the surgeon must cut down into the lungs and take it out ; otherwise the cough would become so violent as to cause fatal hemorrhage of the lungs, by the bursting of a large blood-vessel, from the strain of the violent coughing.

But suppose a remedy had been addressed to the tickling sensation, and had suppressed it, which means removing the cough, then the foreign matter would remain in the lungs, to cause in a few days a dangerous or even fatal form of inflammation or of pneumonia.

CROUP

is a word of terror to every young mother ; it is simply a form of diphtheria — the very sound of which is often the knell of death. This croup is instantly known by the peculiarity of the cough, which once heard by a parent will never be forgotten. The essence of the disease is the formation of a solid substance on what is commonly spoken of as the inner side of the windpipe ; this goes on thickening until

the windpipe is closed and air enough cannot pass into the lungs to support life, and the poor sufferer is smothered to death. The true remedy is to do something which will loosen or detach and absorb this membrane, allowing the tickling and cough to remain, so as to force it out of the windpipe as soon as it is loosened; it often comes out a mass of almost leathery tenacity. This being the case, as every intelligent physician will admit, whatever is done to remove the tickling, or the cough, does just that much towards destroying all chance of life.

In all the above cases, the tickling in the throat is Nature's mode of exciting cough; and it is precisely so in consumption.

COUGH IS CURATIVE!

Is nature's cure, and to smother cough without removing what causes it, is to hinder nature and take away all chance of cure. When a man clearly has consumption, coughs a great deal, has been bringing up yellow matter for a long time, if his cough should subside he will

inevitably die in three or four days, because the cough helps to bring that matter out of the lungs and keeps them clear; but when the cough becomes so weak or so unfrequent as not to remove the matter as fast as it is formed, the lungs begin to fill up with it, air cannot get in, and life ends. The only hope of curing consumption is to promote cough on the one hand, so as to get the lungs clear of the matter in them, and then prevent the formation of more. But the popular sentiment is, that in proportion as there is less cough, the chances of life are increasing, and willingly and hopefully the patient takes what "cures his cough," and is thus led a willing victim to the grave of his own digging. So much are men, with all their boasted intelligence, like the silly creature which feels itself safe when it can hide its head in a hole, to be crushed the next instant in the jaws of its relentless pursuer.

A COLD COUGH.

The cough from a common cold is dry for a few days, no phlegm is brought up, but within

a week the cough becomes loose, a yellowish matter is expectorated, and in two or three days it becomes less and less, and in about two weeks has pretty much disappeared, unless the cold is renewed, and then it may be protracted for weeks and months by frequent renewals.

When a person once takes cold, especially one who has not a vigorous constitution, it is very easily renewed. "The slightest thing in the world gives me a cold," is the familiar expression.

also comes on with a dry, tickling sensation at the bottom of the neck in front; it is a fruitless cough; nothing comes up, and in the course of an hour or two or more it disappears, and is not noticed again until next morning; thus morning after morning it comes with the certainty of the morning itself; but it is known from the dry tickling cough in the first days of a cold, by its continuance for weeks together; the same tickling, fruitless cough; and if in addition to this, the pulse for weeks before

breakfast-time is found to be beating ninety times or more in a minute, especially if there is a perceptible shortness of breath in going up a few steps, it is consumption begun, and in nine cases out of ten will prove fatal within two years, simply because the person cannot be made to believe it is consumption, and hence will not use the means which in almost all cases would avert it, to-wit, out-door activities and horseback riding for the greater portion of every day, until the cough has disappeared, and the pulse has come down to its natural, healthful standard of about seventy beats in a minute, not within an hour of eating and after the person has been seated quietly for about half an hour.

CHRONIC STOMACH COUGH.

A person may have a cough arising from an inflamed or otherwise diseased condition of the stomach, but then the edges and tip of the tongue will be more or less of an angry red color, because the tongue is simply a continuation of the lining of the stomach and reports the stomach's condition.

The stomach cough is louder and harder and deeper than the cough from the lungs; besides, it comes on in fits, and the cough from the stomach seems to be excited at a point lower down than the hollow at the neck, almost from the stomach itself; the bowels are costive, and often there is pain in the forehead. In cases like this a physician should be called, if the patient does not get better in a few days by a mild diet, eating not oftener than five hours apart during daylight, taking nothing between meals; keeping the body warm, and causing a free motion of the bowels at least once in twenty-four hours; and being several hours in the open air every day.

MORNING PHLEGM.

There is a cough of persons over fifty years of age which brings up a good deal of phlegm every morning, of a very sticky, tenacious character. It arises from a condition of the stomach, caused by eating too much habitually and for a long time. The only remedy or alleviant is a more abstemious system of eating;

the food should be more nutritious and more simple, fresh beef, mutton, poultry, coarse breads, and no desserts but raw ripe berries or roasted or baked apples or stewed fruit, without milk or sugar.

NERVOUS COUGH

comes on at any time during the day; caused by anything which excites or worries the mind. This cough has a sharp sound, one cough quick after another, lasting sometimes for an hour; very nervous or excitable persons, and those of a hysterical temperament, are most liable to this cough. The sure cure is to obtain a high state of general health by travel on horseback, or following some agreeable, profitable occupation, which keeps the person in the open air for the greater part of daylight, with nourishing food and regular bodily habits of every description.

LIVER COUGH

is easily distinguished from the others named by being dry; the patient at the same time is

"bilious;" has sickness at stomach; variable appetite; bad taste in the mouth of mornings; tongue is furred, yellowish, with a thick, ugly, sickish looking coating, keeping the person despondent, irritable, and indisposed to do anything. This is easily cured by the person going to work out of doors from breakfast to sundown, eating at three regular times a day, nothing between meals; a cup of warm drink at each meal; eating bread, meat, and fruits or berries, with one vegetable at a meal, such as tomatoes, potatoes, or boiled turnips.

CAUSES OF COLD.

Persons of frail constitutions, or who are temporarily feeble from any cause, take cold from very slight causes; a "breath" of air will give them a cold, because they have no powers of resistance, of repelling cold; their circulation is feeble, the blood is not thrown to the surface and to the extremities, the hands and the feet, so as to keep them healthfully warm; there is no glow on the skin, it is either feverish or it is cold and harsh; the

body is easily chilled, and "creeps" run along the back from a draught of air which a healthy person would not notice.

All colds arise from one of two causes: first, a person gets chilled from remaining in a still position too long; or second, from cooling off too soon after being warmer than natural, which is known by perspiration, called sweat by some, appearing on the forehead or other parts of the body. By ascertaining intelligently what gives a cold, thoughtful persons may be induced to make a systematic effort to avoid these causes of cold, which may be done to such an extent that a person may not take cold once in a year.

An observant lady of a frail constitution noticed that she took cold every Friday. On investigation it was found to be the habit of the family to take up the carpet which led to the dining-room, and wash the stairs every Friday about eleven o'clock. At one o'clock this lady came down to her dinner. It was walking over damp stairs which gave the colds. A remedy was promptly applied; she had her

dinner brought to her room on Fridays. By careful practices like these she lived in enjoyable health to the age of seventy-five years. Many persons would have ridiculed the idea that a person could take cold by crossing a damp floor; certainly it was wiser to accept the situation and act accordingly, than to assume a foolhardy attitude, and resolve to fight it out, and harden the constitution to it, by keeping up the practice. Men gain nothing by fighting against Nature and against the peculiarities of the system; in very many cases it will be found better to humor her. The reed bends to the hurricane and survives; the oak of a century resists and is wrecked within an hour. Colds are given, —

1st. By sudden transitions from heat to cold.

2d. By throwing off clothing while perspiring.

3d. By going from a hot room to a cold air.

4th. By riding in a vehicle against a cold wind, until the body is chilled.

5th. By exposure to a cold damp air, or raw wind, after the throat and lungs have been warmed up by singing or speaking.

6th. By eating ice-cream or drinking freely of cold water or soda water, or any other cold drink when the body is perspiring freely, especially if one remains in a still position after such things.

7th. By sitting near an open window or door with the wind blowing on the person.

8. By sleeping in damp sheets. The safest side of a bed to sleep when away from home is the outside.

9. By failure to remove an article of damp clothing from the body or feet the instant a person becomes still. By all means keep actively moving up to the moment when a change can be made ; better still if something hot can be drank at the instant, for this helps to drive the heat to the surface while the clothing is being changed.

10. By failing to walk with sufficient briskness in the open air, either after night or at any other time. No one can take cold at any

time, night or day, rain or shine, in hail, sleet, or snow, however frail and feeble the person may be, if the simple precaution is observed to walk with sufficient rapidity to keep off a feeling of chillness, and when it is over sit in a warm room, or before a good fire.

11. By sleeping near an open window at any season of the year; the warmer the weather the more dangerous it is, because the cooler the weather the more covering is on the person, and it is kept there by instinct in sleep; while in warm weather the entire person is liable to be exposed.

12. By wiping the body with a damp towel, or getting into a bath immediately after eating or while in a perspiration.

13. By rubbing the feet or body with spirits of any kind when feeling over-heated. This is more dangerous than the use of cold water, because the alcohol of the spirits evaporates with greater rapidity than the water, and consequently carries the vital heat from the body with more celerity.

14. By sitting in a public meeting where

the wind falls upon the body with perceptible coldness, however slight. A false politeness has often led persons to "sit it out," with a fatal result.

15. By laying aside the clothing too soon after out-door exercise: even if, when entering the house, the atmosphere for the first few breaths feels close and oppressive.

16. By sitting still in a parlor on making a call, waiting until the person arrives. This is specially dangerous in the fall and spring of the year, when it is not thought to be cool enough for a fire; then it is that while the out-door air is balmy, the atmosphere of a closed parlor is sepulchral. Never keep a visitor waiting a single instant under such circumstances; better far to adjourn to the kitchen, because the visitor is warmer than natural by reason of the walk, while the parlor is twenty or thirty degrees below the natural heat of the body, which is ninety-eight. It may serve a useful, practical purpose to narrate some of the circumstances under which persons have taken dangerous and even fatal colds: —

Edward Everett, the finished scholar, the accomplished diplomatist, the orator, the statesman, the patriot, became over-heated in testifying in a court-room. On Monday morning he went to Faneuil Hall, which was cold, and sat in a draught of air until his turn came to speak; "But my hands and feet were ice, my lungs on fire. In this condition I had to go and spend three hours in the court-room." He died in less than a week from this checking of the perspiration. It was enough to kill any man.

Professor Mitchel, the gallant soldier, and the most eloquent astronomical lecturer that has ever lived, while in a state of perspiration in yellow fever, the certain sign of recovery, left his bed, went into another room, became chilled in a moment, and died the same night!

If, while perspiring, or while somewhat warmer than usual, from exercise or a heated room, there is a sudden exposure in stillness to a still, cold air, or to a raw, damp atmosphere, or to a draught, whether at an open window or door or street-corner, an inevitable result is a

violent and instantaneous closing of the pores of the skin, by which waste and impure matters, which were making their way out of the system, are compelled to seek an exit through some other channel, and break through some weaker part, not the natural one, and harm to that part is the result. The idea is presented by saying that the cold has settled in that part. To illustrate.

A lady was about getting into a small boat to cross the Delaware, but wishing first to get an orange at a fruit-stand, she ran up the bank of the river, and on her return to the boat found herself much heated, for it was summer, but there was a little wind on the water, and the clothing soon felt cold to her. The next morning she had a severe cold, which settled on her lungs, and within the year she died of consumption.

A stout, strong man was working in a garden in May; feeling a little tired about noon, he sat down in the shade of the house and fell asleep; he woke up chilly; inflammation of the lungs followed, ending, after two years of

great suffering, in consumption. On opening his chest, there was such an extensive decay that the yellow matter was scooped out by the cupful.

A Boston ship-owner, while on the deck of one of his vessels, thought he would "lend a hand" in some emergency; and pulling off his coat, worked with a will, until he perspired freely, when he sat down to rest a while, enjoying the delicious breeze from the sea. On attempting to rise, he found himself unable, and was so stiff in his joints that he had to be carried home and put to bed, which he did not leave until the end of two years, when he was barely able to hobble down to the wharf on crutches.

A lady, after being unusually busy all day, found herself heated and tired toward sundown of a summer's day. She concluded she would rest herself by taking a drive to town in an open vehicle. The ride made her uncomfortably cool, but she warmed herself up by an hour's shopping, when she turned homeward; it being late in the evening, she found

herself more decidedly chilly than before. At midnight she had *pneumonia* (inflammation of the lungs), and in three months had the ordinary symptoms of confirmed consumption.

A lady of great energy of character lost her cook, and had to take her place for four days; the kitchen was warm, and there was a draught of air through it. When the work was done, warm and weary, she went to her chamber, and laid down on the bed to rest herself. This operation was repeated several times a day. On the fifth day she had an attack of lung fever; at the end of six months she was barely able to leave her chamber, only to find herself suffering with all the more prominent symptoms of confirmed consumption, such as quick pulse, night and morning cough, night-sweats, debility, short breath, and falling away.

A young lady rose from her bed on a November night, and leaned her arm on the cold window-sill to listen to a serenade. Next morning she had *pneumonia*, and suffered the horrors of asthma for the remainder of a long life.

Multitudes of women lose health and life every year, in one of two ways: by busying themselves in a warm kitchen until weary, and then throwing themselves on a bed or sofa, without covering, and perhaps in a room without fire; or by removing the outer clothing, and perhaps changing the dress for a more common one, as soon as they enter the house after a walk or a shopping. The rule should be invariable to go at once to a warm room and keep on all the clothing, at least for five or ten minutes, until the forehead is perfectly dry. In all weathers, if you have to walk and ride on any occasion, do the riding first.

A Boston young lady, in perfect health, the loved of a large circle of admiring friends, slept near an open window; the weather suddenly changed during the night, bringing with it a cold, raw wind. She waked up in the morning with a chill, and died of consumption in a few months.

A young man walked rapidly some distance to a public meeting. The house was crowded, but there was no fire, and the room was cold,

although it did not feel so to him; but after sitting an hour or more he felt chilly. Next day he had inflammation of the lungs, and soon after died. A person in perfect health and without previous exercise may sit still in a cold room until chilled through and through, and die of lung fever within a week. The principle in all these cases is: avoid cooling off too quickly or getting chilled.

VOICE COUGH.

Many persons begin to cough after speaking loud for a few minutes, or reading in a conversational tone, or laughing heartily; this cough is excited by a tickling in the throat, at the little hollow at the bottom of the neck. This does not indicate any diseased condition of the parts, as the cough arises from an unusual exercise of the organs of voice. The professional name would be

LARYNGIAL COUGH,

as it arises from the condition of the larynx or voice organs. But there is a condition of

these parts which preludes a tedious, trouble-some, and even fatal disease. The cough is but occasionally present, and is always slight; in fact, is more of a hem or heck than a cough, especially preceding an effort to speak, as if the person was conscious that without this "clearing away" he could not speak distinctly, could not speak without more or less hoarse-ness. This

HECKING, HEMMING, AND HOARSENESS

is an instinctive effort of nature to secure a clear vibration of the voice-organs, which are near the top of the windpipe, and are four little plates as thin as paper, two on each side, one above the other, forming a little chamber in which they vibrate and make a sound, as a fiddle-string or harp or banjo makes a sound by its vibration. It is easily understood, that if any gummy or tenacious substance was smeared on the string it would not vibrate clearly, would not make the proper, natural sound; so in the voice strings, if a person has a slight cold, water forms in the nose, thicker

and thicker, according to the state or violence of the cold. The nose and the voice organs and lungs are a continuation of one another, and when this substance, as a result of a cold, is thicker in the nose than clear water, or the natural substance which is constantly prepared in the nose to lubricate it and keep it moist — for if it were not moist we should be always sneezing, or subject to some unpleasant sensation, — this unnatural thick substance prevents the voice organs from vibrating with clearness, and Nature instinctively causes a heck or hem to dislodge it. If this substance is very thick, we cannot speak above a breath, there is

APHONIA,

as the Greeks would say, — that is, "without a voice," or voicelessness; hence we are more or less hoarse when we have a cold. This material which causes the hoarseness of a cold, is caused by an inflamed condition of the parts; for cold causes inflammation. Inflammation is more blood sent to a part than is natural; and as it is out of the blood that the

lubricating material is formed, if more blood is sent to the part than is natural, then more lubricating material is formed than natural, and this is called phlegm; and because more is formed than natural, it is in the way; the delicate machinery is clogged and does not work well. But if inflammation caused by a cold thus clogs up the voice organs, the same inflammation caused by anything else would do the same thing; that is, cause hecking and hemming and an occasional cough.

will cause inflammation of the voice organs, generating phlegm, and a frequent instinctive hemming to clear it away. In dyspepsia, the stomach is inflamed in its coating, but this coating, called mucous membrane, extends to the voice organs, and onward to the very tip of the tongue; so when the stomach is inflamed the voice organs are liable to become so too, and also the tongue; that is the reason a physician wants to see the patient's tongue, because from its appearance he determines the

condition of the stomach. In dyspepsia, the coating of the stomach is inflamed by too much or improper food and drinks being taken into it, hence a throat which becomes ailing in this manner is called

DYSPEPTIC THROAT AIL,

and has nothing to do with the condition of the lungs. The stomach is the seat of the disease; hence the essential importance of having skillful professional advice to determine the seat of the ailment; for if that is in the stomach, a lifetime might be expended in addressing remedies to the throat and lungs without the slightest effect on the parts diseased. This Dyspeptic Throat Ail has for many years been denominated

CLERGYMEN'S SORE THROAT,

because many ministers were noticed to have had it; not that it was peculiar to them, but their habits of life tended to that particular form of the malady. Their occupation is sedentary; a great portion of their time is

spent in-doors; their habits are studious, sitting down to study immediately after eating, diverting the nervous energy to the brain from the stomach, thus causing the food there to remain undigested for a much longer time than natural. This irritates the stomach, inflames it, and the causes being kept up for months and years, a permanent state of inflammation is set up, extending along the same membranes or lining up to the voice organs; and when once in this condition, the inflammation, originating in dyspepsia, is aggravated from time to time by colds taken which invariably settle on the weak part of the system, and with such clergymen the voice organs are the weak parts, made weak not only by the inflammation existing, but by the strain of the delicate voice chords in public speaking, aggravated in multitudes of cases by injudicious conduct in connection with their public addresses. In making a speech these organs are heated; the whole breathing apparatus is excited, warmed up; the body itself is placed in a perspiring condition, aggravated by the

warmth of a crowded room and the influences of a foul atmosphere. If, when the services are over, the minister goes into the colder out-door air; if he stands still conversing with persons; if he walks very slowly home; if he rides in an open vehicle against the wind or on horseback, especially if it be a cold, raw wind, the effect is positively inevitable that he cools off entirely too soon, and most probably finds himself in a chill, to result in a cold settling on the weak part — the throat, — to be followed with soreness, hoarseness, cough, to last for weeks and months, if indeed it does not result in ulceration, or going downwards, induces consumptive disease in the lungs, already weakened or in a tuberculous state from years of sedentary in-door occupations and the effects of a dyspeptic condition of the system.

These colds can be modified and prevented for an indefinite time by a little care. As soon as a minister sits down after his sermon, he should throw a cloak or shawl over his shoulders, to remain until he leaves the pulpit, when he should adjust his clothing for going

out-doors, putting on hat, coat, and gloves, and remain in the church near the stove or register for a few minutes to allow the body to cool down gradually; then, on leaving the church, keep the mouth closed and walk briskly away. The object of keeping the mouth resolutely closed is to send the air to the lungs through the nose and head, thus warming it before it gets to the lungs, and thus preventing their being chilled. It is nothing short of suicide for a minister on a cold day to leave his pulpit and ride on horseback or in any kind of vehicle from the church, because the body is in a still condition, preventing the vigorous circulation of the blood; besides, the wind carries the vital heat from the system with great rapidity. Fatal pneumonia, putting the victim in the grave within a week, often results from the conduct just detailed.

But clergymen and public speakers are not the only persons liable to this ailment of the voice organs, causing hecking, hemming, and cough, according to circumstances. All who sit a great deal, all who have in-

door occupations, all who are of frail constitutions from any cause, are liable to be annoyed more or less by the troublesome symptoms just named, because such persons are specially liable to dyspeptic disease, which has been shown to be a frequent cause of the malady. It was stated that in the case of clergymen and other public speakers, the dyspeptic throat ail was frequently kept up and aggravated by the colds which they were liable to take from the peculiar circumstances connected with their calling; but the other classes of persons named are also liable to have the ailment kept in continuance by the same cause of frequent taking colds. Such persons are all the time taking cold, and that too from the slightest causes, because they have a feeble circulation, and have such little strength that the least thing in the world gives them a cold; and these being so frequently renewed, the hecking and hemming and clearing the throat are so incessant that after a while it becomes a habit, and the person never attempts to speak without preceding it with a hem or a heck. Un-

der such a condition of the voice-making organs, caused in the first place by a dyspeptic condition of the stomach, and kept up by repeated little colds, it must be evident that the first step toward cure must be the cure of the dyspepsia, and the next step, quite as essential, must be the avoidance of colds. The latter is more fully treated in "Bronchitis and Kindred Diseases;" the former in the book entitled "Health by Good Living," or the unmedicinal treatment of dyspepsia, and several other ailments. The general principles of treatment only can be laid down here. As to the avoidance of cold, persons by care as to the points laid down at page 17 need not take cold once in a year, especially if the dyspepsia has been cured; for then the general health becomes so firm, and the circulation so vigorous, that a bad cold is a rare occurrence.

Dyspepsia is best cured by taking long journeys on horseback, or travelling great distances in stage-coaches, if the person eats but thrice a day at regular times, avoids eating between meals, and maintains regularity in all the bodily functions.

The more persons are out of doors, in all weathers daily, the less liability is there to take cold.

The more persons bundle up with great quantities of clothing, the more liability is there to taking cold.

At the same time, every person for himself must dress in such a way as to keep off a feeling of chilliness when in a still position; and if out of doors, there should be bodily activity sufficient to prevent any chilly sensation.

Above all, each one should observe what is most likely to give him a cold, and then be always on his guard against it.

COLD FEET.

All persons who have cold feet, take cold from slight causes, and these colds are followed with cough. When this is the case, the attention should be constantly directed toward whatever may have the effect to keep the feet warm, so as to draw excess of warm blood from the head and throat and lungs. The feet are cold

because there is not blood enough there, and there is too much about the lungs and head; and if the circulation is equalized by drawing more of the warm life-blood to the feet, more good will be done toward relieving various ailments of the throat and voice and lungs, than by any medicine known to man; — and many good medicines fail of their good effect altogether, because the feet are allowed to remain cold habitually.

One important means of keeping the feet warm, and of restoring to them the natural warmth, is to keep them scrupulously clean.

The largest pores of the skin in the human body are in the feet, and through these pores a vast amount of the wastes of the body escape, and if they are clogged up, these wastes are driven back and reabsorbed, and the whole mass of blood in the body is contaminated; hence persons who are troubled with cold feet should dip them in cold water an inch deep, night and morning, for half a minute, then rub them with the hands, and wipe dry and draw on the stockings, all within three or four minutes.

In reference to the hecking and hemming and clearing of the throat, which cold feet may keep up, after it has been established by dyspepsia, it ought to be borne in mind that it is more troublesome than dangerous; persons frequently have it for fifty years, without any appreciable effect on the system; if there is a decided cough with it, coming on every day more or less for months, it may be taken for granted that it is consumption; that the disease is founded in the lungs, and that the stomach has nothing to do with it.

COLDS.

"Colds, coughs, and consumptions" are associated in the popular mind, and are considered so nearly alike as to be closely connected with a fatal and dreadful form of disease. This apprehension has no real ground, except in the fact that persons who have colds cough, and persons who have consumption cough; and because consumption is always accompanied with cough, there is a feeling that any cough may end in consumption.

The cough of a cold and the cough of consumption are essentially different in two things.

First the cough of consumption is dry, brings up nothing for weeks and weeks. The cough of a cold gets loose, yields phlegm within a week.

The cough of consumption in its first far-off beginnings, comes on in the morning on waking up, or soon after rising and stirring about the room a little, and is not noticed again until next day, unless the disease is considerably advanced. The cough of a cold comes on at any time of the day or night, with no regularity whatever, and grows rapidly more frequent within the first ten days after taking cold, and then becomes rapidly easier and less frequent, and at the end of two weeks generally disappears, if the cold is not renewed; with frequent renewals it may last for months.

Second, the product of a cough from a common cold, called phlegm, is simply an excessive secretion, an unusual amount of a natural product or manufacture of the body. The product of a cough in consumption is appar-

ently pretty much the same, but in reality it is a part of the substance of the lungs, — they are in a state of destructive decay. But thus far no reliable practical use can be made of these facts, because no way has as yet been devised by which one can be told from the other. Various differences in the product of two phlegms have been suggested, but up to this writing, experienced educated medical men place no reliance upon any known distinctions, until at so late a state of the disease that death must inevitably ensue within a very few days.

It is a popular belief that if the phlegm sinks in water immediately, it must be from decaying lungs; but the phlegm of a cold will very soon sink in water sometimes, especially if the cold be a very bad one.

If a person chews a rag or a piece of paper and throws it down on the floor, it will present ragged edges, or they may be called jagged. In the later stages of consumption, the edges of what is spit out on the floor are jagged, are sharp and irregular. In a common cold, the matter is more even and rounded at the edges,

like the appearance of oil poured into water. But long before the expectoration of the consumptive presents this jagged appearance, the experienced physician has determined the fact by infallible indications. It is therefore unsatisfactory and altogether unsafe for any person, not a physician, to decide whether any case is consumptive or not from the appearance of what is expectorated after coughing.

NATURE OF A COLD.

When the whole or any portion of the body is exposed to cold in any way, until it has become colder than natural for a longer or shorter time, according to the vigor of the individual, a cold will be the result; which means that reaction has taken place, and there is fever or inflammation, according to the violence and continuance of the causes. There is in this a kind of intelligent instinct. If a fort contains a great number of soldiers, distributed in various parts of the structure, and one portion is unexpectedly attacked from without, the intelligence of the men leads them to hurry toward the part attacked for purposes of defense and repair.

The life-giving warmth of the human system is supplied by the blood, and when cold, or any other injury is applied or done, the instinct of the body sends instantly an extra amount of blood to the spot for purposes of warmth; this excess of blood is called inflammation, that is, flame-like, red, like a flame of fire. If the finger is cut or scratched, blood is hurried to the wound; in time the edges of the wound be come red, become inflamed; this extra blood is to supply new particles of flesh to take the place of these injured or destroyed; and without this inflammation the healing process could never take place. Sometimes there is so little life in the body that there is no inflammation, and the part would never heal, unless the surgeon, knowing what was the matter, uses means to create an inflammation, and healing takes place at once. So that in reality a cold is a fever or an inflammation, which is not the cold in reality, but caused by cold. This is recognized in the fact that when a man takes a bad cold and it settles on the lungs, it is called by some "lung fever," by others "inflammation of the lungs," by others "pneumonia."

If a person takes a cold and it settles in the throat, causing hoarseness or pain or other ill feeling, it will appear on opening the mouth and looking down into the throat, near where the voice organs are, that the parts are almost blood red, instead of having the appearance of the color of the lips, and the throat is said to be inflamed.

affect different persons differently; they "settle" upon, they attack the weakest part of the system, as a wily enemy attacks the weaker part of a fortification. The part is weak for want of a vigorous action and circulation there, made weak by some exposure, by some wound or hurt or over-strain. Stephen A. Douglass, once a great political power, spoke to a large out-door assembly with considerable effort of the voice organs, which were overstrained; and remaining in the cold open air after the speaking, a cold settled on the delicate organs and he died in a few days.

The name of a cold is given from the organ

on which it settles: if in the head, it is called "a cold in the head;" if in the nose, it is denominated a "catarrh;" it causes "croup" in children if it settles in the throat, or "quinsy" if in grown persons. Cold in the lungs is "a common cold," if light; if severe, it becomes "pneumonia." If its force is expended on the covering of the lungs we have "pleurisy;" if in the branches of the windpipe, "bronchitis" is the result. A cold making itself felt all over the body, is under certain circumstances "influenza." When a cold settles on the liver, the person has a "bilious attack," or "sick headache." If a cold spends its force on the covering of the bowels, known by a dull pain, increased by a long breath, it is "peritoneal inflammation," getting worse for three mornings in succession, ending in death or recovery. Colds sometimes attack the bowels, causing thin and frequent discharges; in this case the cold is said to have run off through the bowels, and is one of the easiest and speediest ways of getting rid of a cold; hence persons who have a cold, and during the first twenty-four hours use

means to have several free actions of the bowels, cut the cold short off and are well in a few days.

It is therefore wise for each individual to ascertain how a cold affects him, and address suitable remedies accordingly. It saves life sometimes to know the cause of a symptom.

CURE OF COLDS.

A common cold has its course to run like measles or similar diseases, requiring about two weeks if it is not renewed; but if proper measures be adopted to cure a cold within thirty-six hours after it has been taken, it can almost always be cut short off and will disappear within three or four days. If measures for a cure are not thus promptly adopted, the cold will run its course of two weeks, in spite of all human remedies to the contrary. In this simple fact is found the reason why there are so many cures for a cold, which are as utterly valueless in that respect as the application of a thimble-ful of dust to the end of the thumb-nail; and yet every one of them is advised with a confi-

dence and sincerity and earnestness which is almost irresistible. A cold is taken, a remedy is tried; it is unavailing. Another is proposed with like results; after three or four or more have been tried, another is suggested at about the time the cold in its regular course would "break," that is, become loose, and get well; this remedy seeming to be efficacious after all the others had so ignominiously failed, is vaunted to the skies; every person who is willing to listen is told with various embellishments and exaggerations of the wonderful effects after so many other noted ones had failed, and forthwith the happy man commences to make it the business of a lifetime to propose this, his favorite remedy, as an infallible cure under all circumstances of the worst cold that could possibly be taken.

The safest, most prompt, and certain method of curing a common cold, is to go to bed within twelve or fourteen hours after it has been first taken and stay there until cured, observing, —

First. Keep abundantly warm all the time, with the hands under the cover.

Second. Drink nothing but hot teas, eat nothing but coarse or crust bread softened in the tea, with raw fruits, berries, or melons in their natural state, at intervals of five or six hours during daylight.

Third. Keep the bowels acting freely, at least twice a day, by such means as are most familiar. It is impossible that this treatment should fail to cure a cold under any ordinary circumstances, if fairly tried and with sufficient promptness, because the pores of the skin are kept open by the warmth, and give exit to the ill humors in the system and prevent fever.

The grosser wastes of the body are conveyed away by the free action of the bowels, whilst the supply of phlegm is cut short by the moderate and light and cooling diet. For let it be remembered that every mouthful of solid food swallowed after a cold has been taken protracts the cure that much by furnishing material to be converted into phlegm, which must be coughed up before a cold can begin to get well. A judicious attention to these suggestions will

prevent much human suffering, and save many a life from being prematurely cut off.

NERVOUS COLDS.

Persons of a nervous temperament of large brain, whose nervous system has been shattered by trouble or disease, suffer greatly from colds taken; they seem to settle on the nervous system and expend their full force upon it, especially upon the nerves of digestion, which seem to a great extent to lose their power and fail to act on the food. The appetite may be good, in fact is too good, but within an hour after eating, the stomach begins to complain; wind is generated in large quantities and does not readily escape, but distends the stomach, makes it tight as a drum; this distention causes it to press upwards against the yielding lungs, inducing such shortness of breath as to cause the patient to have at times a feeling of impending suffocation, and an open window or door is sought with a kind of desperation. This want of free breathing, in consequence of the compression of the lungs by the gas-distended stomach, induces

a feeling of fainting, or lightness or dizziness in the head, so great sometimes as to require the person to catch hold of the nearest thing within reach for support. Those conditions set up an irritable state of the whole nervous system; the mind is greatly disturbed, fitful and changeable in its decisions; the temper is soured, finding vent in complaints and fault-findings, alternating with a great depression of spirits, weighing down both mind and body; at length the bed is sought in weariness and exhaustion; but there is no sleep for hours, if any; now and then there may be a fitful doze, but unsatisfying, and the morning comes finding the unhappy patient more miserable than the night preceding, — no strength, no appetite, no rest; the mouth and throat seem to be full of a slimy phlegm, and in the efforts to hawk it up the "stomach is turned;" vomiting is induced, bringing up more or less of the food eaten the day before, undigested and unchanged. At this point, improvement begins, for the stomach being emptied of its food, and nature taking away the desire for more, the system has time

for rest, repose, and sleep, and soon recovers its usual tone.

In cases like these, nature is the best physician because the safest, although judicious medical aid could cut short the attack in a few hours; or judgment, decision, and self-denial on the part of the patient would ward off the attack in a great many cases; for the sufferer, as soon as the cold has been observed to be taken, has only to take no food, go to bed, keep warm, and stay there until next day; or if from inattention the attack has begun, a vigorous emetic to empty the stomach would make short work of it. A less disagreeable, but not so prompt a remedy, would be in bringing about a loose condition of the bowels, by a table-spoonful or two of salts or castor-oil, or better still, some medicine which would act on the liver certainly and vigorously. The great points in all colds, however differently they may affect the system, are: keep warm in bed; use hot drinks, and take very little food, — and that should be cold coarse bread, fruits, berries, and tomatoes.

PART II.

CONSUMPTION.

Is a gradual destruction of the lungs, a slow wasting away of the "lights," as they are called, by many, when applied to animals.

There are various kinds of consumption: Consumption of the Throat, Consumption of the Bowels, but when the word "Consumption" is employed, by the great mass of people, it means Consumption of the Lungs, and there arises in the mind the idea of cough, of pale face, of wasted flesh, of stooping frame, of slow and careful walk, of large round eyes, the white predominating, a waxen countenance, as serious as the grave, with a general look of anxiety and distress, which wakes up warmest sympathies in hearts which seldom feel at all.

The reason of this universal application of the word "Consumption" to the lungs is, that so many are destroyed by it in civilized society. It is estimated that one adult out of every six, dies of this disease. Such being the case, scarcely a man who reads these pages, but will, sooner or later, even if he escape himself, have his eye moistened or his heart stricken by the work of this great destroyer. These things being so, every man owes it to himself, to his family, and to his kindred, to obtain a knowledge of this disease, as to its nature, its causes, its prevention, and its alleviation or cure. Information of this kind can be communicated without the necessity of long disquisitions, of tedious investigations and distressing niceties of discrimination. The ailment is so common, it is of such every day occurrence, that most readers are familiar with it, can pronounce upon its existence in the person of another with considerable correctness, in its decided stages; yet such is the deceptive character of the malady, that it is almost a symptom of it, that the

man himself cannot be made to believe in its presence, in his own person, until within the last weeks of his existence, and in very many instances, not until the last, the very last hour of conscious life. On being called to a gentleman on one occasion for the first time, it was apparent that he would soon die. When informed of his true condition, he replied, "Doctor! you do not understand my case; if I only had a carriage to ride about the city, I would be a new man in a few days." He died that night. Another was a young gentleman of high promise. I had been attending him for some time and steadily acquainted him with the progress of his disease. But he constantly talked of his plans and purposes, with that patronizing consciousness of the groundlessness of my fears, which it was difficult to withstand with equanimity. "Why," said he, "my mind is as clear as a bell." And so it continued to be, on all other subjects. Soon after, his factor came to render an account of bills of sale of his cotton crop. He examined it with great

care, and in adding up the column, detected an error of a few dollars. He died the next day.

The great reason of this deception is, there is sometimes no pain at all, no suffering, no apparent violence, and the patient proposes to himself the question, "How can I be seriously ill, when I am conscious of no distress?" He feels that if he only had a little more strength, he would be well enough. Besides, there are moments during any day either soon after a sound sleep, or in the excitement of fever, when he feels as if he had that strength, and this increases the illusion. A young gentleman of family and fortune was travelling homeward with this disease upon him. On waking up early one morning, he said to me, "I feel as if I could travel a thousand miles." The same week, he slept the sleep which knows no waking.

There is something fearful in the thought of being a victim to such a delusion; of travelling along the very verge of the grave, believing ourselves to be treading on solid ground,

all unconscious of the actual fact, that every moment it is crumbling from beneath us.

There is a moral reason for this strange delusion. We are all loth to admit unpleasant truths. A man in business is the very last one to perceive that he is a broken merchant. His neighbors have known it long ago, but he himself does not become fully conscious of the fact, until the sheriff turns the key on his door.

One of the consequences of this delusion is, that it prevents the person who is the subject of it, from taking those active measures which would avail to defer the malady indefinitely, if not to accomplish a permanent cure. Forewarned is to be forearmed. A stitch in time here, saves a million.

As the reader, however strong and robust now, however high in health and buoyant in hope of years, long and successful, may at any time become the subject of a malady so deceptive, he will, if he is wise, be at pains to ob-

tain such a knowledge of it, as to prevent him becoming a victim to its delusions.

There is another thought in the minds of men, in reference to this affection, which is not less illusory than the one already named. Persons often express themselves thus, "I wish I could die of consumption, it is so painless a disease, and gives one full time and fair warning to prepare for death." The time it does give, as about two years is the average of its duration. As to the warning, it is certainly given in tones loud enough to be heard by thousands afar off, but not loud enough for the ears of the man himself—given in arguments so convincing and so palpable, that the humblest intellect can perceive them, but not clear enough to make the invalid himself appreciate their power.

As to the painless nature of consumption, the delusion is as complete as it is general. In some very few cases, there is measureably little pain, one in a million perhaps. In all, there are times of measurably exemption from severe

suffering. But the very countenance of a consumptive shows an abiding distress, so continued, so ever present, that it has fixed its unmistakable imprint on the whole man. "Death by *the drop*" as it is called, where a single drop of water falls upon the head at one spot, is said to be rather pleasant at first, but continued hour after hour, day and night, soon produces delirium, and if continued, the man becomes a raving maniac for life. But there is nothing in consumption which is even transiently agreeable, not one symptom, but many. The whole man is diseased, every drop of his blood is on fire. The ceaseless fever burns out his life. And when all his fat and flesh are consumed and there is no more oil to feed the flame, no more carbon to keep up the dying fires, nothing left but skin and bone and tendon and ligament and strings, then he begins to freeze. The fingers first, and feet, all his efforts cannot keep them warm. Week after week the cold chill of death creeps higher and higher, nearer and nearer in the slow progress of months, until

the heart itself becomes an icicle, and the man is no more.

So far from death by consumption being an easy one, there are few maladies which involve a more fearful amount of suffering in the aggregate. The shivering chill of the forenoon, the burning fever in the after part of the day, then the drenching night sweat, clammy and cold as death, and thus for days and nights, for weeks and months, if there is any "*ease*" here, we cannot bring our mind to perceive its reality.

THE COUGH.

The very sound of it, in an advanced stage of the disease, is unspeakably distressing. At night-fall, the poor, wasted, wearied body yearns for repose, the eye looks longingly to the bed, while the effort for undressing seems herculean and the time requisite for it, an age. The fleshless skeleton totters to its pillow, and on the instant, the very instant, the cough begins, at first hard and dry; nothing comes up. Cough, cough, cough! straining, jarring, racking. He

feels "If I could only get it up, how sweetly could I rest." And he coughs on. The slow minutes are hours, and the hours, ages, as he tosses on his bed, the wan face bathed in the perspiration of exhaustion, or flushed with the fever which is burning out his life. At last a mouthful does come, and he hopes for rest. A mouthful of lungs rotted away, falling upon the floor in thick yellow lumps, with spraggling, ragged edges, giving the coveted repose, not for hours, nor even minutes always, but for one, a few brief seconds only, and then begins again the sad, sad labor, to be completed only until the grey of the morning comes, when more dead than alive, and from utter exhaustion, the patient falls into a troubled sleep, as unsatisfying as it is brief; and more weary than when he retired, he leaves the bed with the same confident hope of relief, as he had on retiring, and as certainly to be unrealized; and thus baffled from sunrise until evening, and from nightfall until the morning comes, he wears his life away.

Death by consumption easy! Look at it.

The appetite is usually good, he looks forward to the eating hour with interest and satisfaction; he thinks over and over again how he would enjoy this and that article of food, and in the delirium of anticipation, he projects himself into the long years of the future, and revels in thoughts of how, when he gets well again, he will take care of his health and purchase him a little farm, and ambitionless of society, and position, and equipage and office, and wealth and a name, he will devote himself to the leisure cultivation of fruits and flowers, and feast day after day on pure milk and fresh eggs, and new butter, with vegetables from his own garden and honey from his own hive. Upon this elysian reverie the call to dinner breaks, and with watering mouth and eager expectancy, forgetful of every symptom, oblivious of every pain and suffering, he lays himself out for a hearty meal. He eats much and long, and enjoys it. Food never tasted half so good and he rests not until a feeling of perfect satisfaction comes over him. But the first material change

of position, moves also the fluid mass of rotted lungs within him as certainly as the motion of a glass changes the position of the water in it; this change of matter to a fresh part of the lungs, the sensibilities of which have not been obtunded by the long pressure of this decayed substance on one spot, excites a tickling sensation, not in the lungs themselves, but in the hollow at the bottom of the neck in front, just as the eye sees, not at the eye-ball, but on the retina, just as the stricken elbow gives the sensation at the distant finger-ends, this tickling gives cough, a mere heck at first, but each successive heck causing another quicker and more decided, until a regular hard cough sets in, bringing on gagging, and soon the whole meal is cast up, for no rest comes until it is all brought away. And thus it is with every meal, for many of the last weeks of life, and in which we look around in vain for any "*ease.*"

To listen to the merry laugh of others, but no such mirth to you, for it brings on a cough, which may last for the next half hour. You

hear the song of gladness in others, but the first note you strike, brings on the inevitable cough. You listen to some splendid speech; or contemplating some noble action, or gazing at some magnificent object of nature or of art, the thrill of admiration sweeps over you! and the hated cough comes on by the very emotions of the mind.

You look out upon the gay fields of a summer's morning, or upon the bustling crowd in the business street, or the more joyous promenaders of the avenue, or the sleigh bells tingle by on the bed of driven snow, and the ceaseless laugh, or the loud yell of youthful recklessness, all, all pass before you with sweet remembrances, the sweeter from the distant impression, that none of these may be ever yours again. In none of these can you participate now. There is no strength of limb to walk the summer fields; there is not breath enough to enable you to keep pace with the busy crowd, no heart to join with the gayer throng, while the very thought of sleighing over the cold

snow, causes you to shrink back with a shiver, and the sympathetic cold chill drives you from the window to the fire place. If there is any "*ease*" in aught like this, it is imperceptible to me.

But when confinement to the bed gives loud note of death, and one by one your delusions have all passed away, and you sit propt up by pillows, your only apparent enemy being the phlegm, which you wish to get away, there is less prospect of ease than ever. Every breath you draw makes it boil up and rattle and bubble within you. You feel as if a little cough would bring it up. But the sensibilities of the parts are in the main taken away, for you are dying. You have not strength to cough, except at intervals, and then so faint, that it does not "*reach it*," or if it does, it barely brings it up to the throat, when it falls into the "Swallow," and goes down into the stomach, there to be mixed up with your food and drink, whole pints of it in a day sometimes! O let me run

away to some distant planet, to escape so horrible an end.

At last, there is not strength enough to bring it as far up as the gullet, and accumulating every hour, the remaining lungs become clogged up, the slightest amount of air gets in, and a dreadful oppression comes over you; you feel as if one good, long, full breath would be perfect happiness, and no giant could labor harder to get that breath than you. In that terrible effort, the effort for life, the eyes become glary, the mouth remains open, the bosom heaves laboriously, each partial breath a groan, large drops of clammy sweat stand upon the forehead, the speechless tongue, the pulseless wrist, the fading sight, and all is over!

CAUSES OF CONSUMPTION.

Such being a history of the progress and end of this ruthless disease, it may be instructive to inquire into its causes.

Suppose we close the books, lock up the libraries, consign all theories to the grave and

rely upon that best of all informers, *observation*, and with the aid of common sense, endeavor to learn some facts for ourselves and deduce conclusions, which it is impossible to gainsay.

The first idea which strikes us, on mention of the word "Consumption," is that of a pale, emaciated form. We all know that paleness of the face arises from the absence of the natural amount of blood, the pure blood of health. Emaciation forces on the mind the conviction of a want of nourishment. We then arrive at that most important fact, underlying all others, that the essential nature of consumption is a marked deficiency of flesh and blood, paleness and emaciation being its universal attendants, conditions, or symptoms, without which it never can exist. It must then strike the thoughtful reader, that if paleness and emaciation are always present in consumption, debility must be as inseparable from it, as death is inseparable from the grave; and this other conclusion is equally obvious that inasmuch as *Paleness*, *Emaciation* and *Debility* are always

present in consumption, that whatever causes paleness, emaciation and debility, in continuance, is capable of causing consumption.

It must not be inferred here, that every man who is pale, emaciated and weak, has consumption. The fact is stated, and there left, *Paleness, Emaciation and Debility are never absent in any case of common consumption of the lungs, and that whatever causes these, in permanence, is capable of causing consumption.*

Now, instead of going on naturally, and stating the causes of consumption, we will first proceed to show what are *not* the causes of consumption, in order to make the contrast more instructive and impressive.

A man naturally shrinks from taking ground antagonistic to generally received opinions, and it ought never to be done, except on mature investigation, on the clearest conviction and with the fullest impression, that it is for the public good, by advancing the truth. It is by the pure truth that the world is to be mil-

lenialized, and made a paradise; and the uni-

versal sentiment should be, *Let truth prevail, wherever it may lead.* We have nothing to do with the consequences of pure truth. He who is Truth itself, will take care of that.

"*Tight lacing*," as it is called, does not directly originate consumption; its tendencies are to prevent it, if not actually present, and to cure it, if it is.

All physicians know that consumption attacks the top of the lungs, under the collar bone, and that long before it reaches half way down, the man dies, not actually for want of enough sound lungs to live upon, for persons have lived to a good old age, who have had but one half of the whole lungs in healthful operation, but they die from the effect which the disease has had on the whole system.

Tight Lacing affects the lower portion of the lungs mainly, and causes the person to breathe less with the bottom of the lungs and more with the top. We have seen that the bottom of the lungs can take care of themselves. It is not one time in many thousands, of those who

die of this disease, that the lower portions are materially affected, if at all.

The reason that the lower portion of the lungs is the last to become consumptive is, that it has more room for full action, the lower portion of the ribs and the stomach are distensible, and in drawing a full breath, we see how readily they swell out. And consumption never can exist where the lungs have free, full play to the influences of a pure atmosphere; and even when the atmosphere is foul, those portions which work most freely, are the last to become diseased; and conversely, the upper parts of the lungs, being encased by unyielding bony walls, have not the capabilities of distension which the lower portions have, and consequently are more liable to disease.

It is intuitive to us all, that those who are out of doors most, who run and race about most, who are most active in their pursuits, are less liable to consumption than those who follow still occupations, indoors. Reasoning from a general fact we would conclude then, that

very many more women die of consumption than men. But it is simply not so. Now what is the reason? Women breathe more with the upper portion of the lungs than men do; any one's observation will confirm this assertion. Therefore, the province of woman being more naturally within doors, a beneficent Providence seems to have so created them, that there should be an antagonism within them, and beyond their control, to the otherwise natural liabilities to the disease. We therefore arrive at the inevitable conclusion, that compression of the lower portion of the lungs, throwing as it does, a large part of the breathing and distension to the upper portion, does thereby render the upper portion less susceptible to disease. We mean moderate compression.

What then becomes of the impression that *tight lacing* originates consumption? It must simply go the way of multitudes of specious errors.

The reader will please bear in mind, that we do not advocate tight lacing. On the contrary,

we are opposed to all kinds of compression, all impediments to the fullest and freest action of every member and portion of the human body, that there should not be a buckle or button, or string or pin or pad about us, more than is absolutely necessary to keep our clothing from falling off our bodies. We are only speaking of *Tight Lacing* in its bearing on consumptive disease. If the statements which we have made are startling to some, and inconclusive to others, let us appeal to facts. The advent of the *Cold Water Era* has been the means of introducing many wholesome truths. Its friends have been energetic, enthusiastic men, not over bright, it is true, but they have been sincere; whether they have done more good than evil, it is not now necessary to inquire. But one effect, which their efforts have aided very considerably in bringing about, is the comparative abolition of tight lacing, and for their labor they deserve much praise, showing as it does, that they are not so bigoted that they cannot *fol-*

low in the path of *educated* medicine, when they believe that path is truth.

It has taken ten years to bring about the abandonment of the corset. And now we have two simple questions to propose.

Do fewer women die of consumption to-day, when the corset is in comparative desuetude, than ten or twenty years ago when tight lacing was all the rage? All statistics show that there is no remarkable change.

The people of the town are more dressy than those of the country, more apt to go to extremes, and more universally follow leaders. Is the proportion of women who die in town of consumption, materially greater than in the country? Statistics say no. *Binguet* says of ninety-one women dying of consumption, forty-seven were brought up in town and forty-one in the country, showing a difference of only one-seventh in favor of the country. But women wear corsets and men do not, yet in 1837, of persons dying in a Paris Hospital of consump-

tion during four years, one-tenth more were males than females.

In England, the returns of the Register General show, for 1845, that in the country, where corsets are less worn, more women die of consumption than men; but that in London and other large cities, the mortality from this disease is much less among women than among men. Now it is reasonable to infer, that there is less tight lacing among a farming population than in a city, and the above fact shows that where tight lacing most abounds, consumption is less prevalent. We do not say that tight lacing has the credit of this exemption, but it is clear that if tight lacing does tend to produce consumption, there are causes in operation which greatly overpower that tendency; hence we have some reason to infer that such a tendency has no appreciable existence.

It is thus seen, that in cities, where corsets are more worn, fewer women who wear them die of consumption than men, who do not wear them, notwithstanding their greater liability to the

disease from their sedentary indoor employment, and so great is the difference of liability, as to in and out door occupation, that in Geneva, thirty-seven per cent. of varnish painters died of consumption, while of gardeners who perished by the same disease, there was only four per cent. Of painters, tailors, engravers, clerks, &c., a hundred and forty-one out of every thousand died of consumption, while only eighty-nine of agriculturists, blacksmiths, slaters and the like died of it. With these strong facts before us, we are obliged to infer, that there is something in woman which is exemptive of consumption, and it is legitimate to conclude, that one of the elements of that exemption is a fuller, freer working of the upper portion of the lungs, which is uniformly the seat of the disease. This is fully coincident of the admitted fact, that full, free breathing, tends to prevent consumption. If additional proof of this most important practical fact is needed, it is found in the uniform statement of great travellers and close observers.

Buffon writes that all animals inhabiting high altitudes have larger lungs, and more capacious chests than those which live in the valleys. Wilson and Audubon agree that birds which practice the highest flights have the largest receptacles for air. Thus it is, that reasoning from birds and animals to men, there is no city in the world so free from consumption as Mexico, it being nine thousand feet above the level of the sea. For in the same year, while three persons out of every hundred died of consumption in that city, there perished by that same disease, in our larger cities, eighteen persons out of every hundred. Why? Because the rarified atmosphere of high altitudes, compels the breathing of larger volumes of air, to answer the wants of the system, there being less substance in a rarified, than in a condensed atmosphere; and this taking in an increased volume of air at every breath, produces a corresponding development, distension of the lungs, which is, as we purpose to show hereafter, the fundamental essential, in the preven-

tion, the amelioration, the cure, in every case of consumption ever reported.

HEREDITARY TENDENCY *is not specially promotive of consumption; it is more nearly a preventive.*

To concentrate the argument in a few words, and make the ordinary, the every day observations of reflecting men constitute the proof, it is only necessary to draw attention to one familiar fact. *It is not the feeble of adult life who soonest die.* We can all bring multitudes of cases to our remembrance, where the stout and robust and strong, full of vigor and health, have long since been laid under the clods of the valley, and whose names are remembered to the very few; while of others, so tottering and frail, that no one believed they could possibly live beyond a few short years, an age or two has passed away, and they are living yet, and likely to live a good long time to come. At the age of twenty-two, P. S. was believed to be in a hopeless decline, "she can't possibly live beyond a year or two," was a very common

expression among her friends. But she did live, has survived three husbands, and half a century besides. And this day, we know her to be in better health than at any time within the last ten years, and bids fair to reach "four score."

The explanation of this fact is simple, conclusive, and of great practical value.

The feeble feel the absolute necessity of taking care of themselves. They know that upon it hangs the question of enjoyment and suffering, of life and death; indiscretions, imprudences, tell upon their feeble frames, with almost telegraphic rapidity, and there is only one alternative, *carefulness or suffering*.

On the other hand, those who abound in vigorous health, feel that *their* constitutions are impregnable, that nothing can hurt *them*. Thus they are habitually negligent, careless, and often even reckless. The result is, they soon pass away, many of them long before their prime. Hence, practically, persons hereditarily consumptive. do not very necessarily

suffer more from consumptive disease, than those who are exempt from this tendency.

This at least is the theoretical statement; but mere theory should never override carefully ascertained statistics. And to this very point, the attention of scientific men has been long drawn, and we only record the statement of one of them, and he had large opportunities of long and wide observation. "Hereditary predisposition to consumption is as frequent among persons brought up in the country as among those brought up in town. Those born of consumptive parents seemed not to be more liable to take cold than others."

The same writer states, that "of ninety-eight persons who died of consumption, thirty-three were naturally of a robust constitution, and twenty-one were of a feeble constitution.

Bad colds do not originate consumption. Truth is useful everywhere. Its practical application in physics and morals tends to ameliorate the evils of life and elevate our natures. Hence,

we make the above statement, which many will consider as extravagant as it is untrue.

The result of the very prevalent opinion that bad colds beget, generate, originate consumption, is that, for fear of taking cold, many are induced to avoid going out of doors, except in the mildest weather; this causes them to remain indoors, especially if invalids, full nine-tenths of their time, in this climate; hence, nine-tenths of their time they are breathing a vitiated atmosphere, which is quite competent to generate general disease where it is not, and aggravate what already exists.

But suppose the impression was as general that bad colds were curative of consumption, as that they originated the disease, then, the consumptive would expose himself more freely, would go out in all weathers, hot or cold, rain or shine, fair or foul, burning or freezing, and with a kind of desperate recklessness, he would court what is now considered the danger, AND THAT WOULD CURE HIM!!

A bad cold can no more originate tubercular

consumption, than powder could ignite without fire. When tubercles are already existing in the lungs, bad colds may develope them. As the powder must be there, before the fire can produce explosion, so tubercles must be in the lungs, before a bad cold can develope them into consumption, and the prevalence of tubercles is the result of operations going on in the system for years; while a bad cold has nothing in it which tends to produce tubercles, for it runs its course usually in ten days, just as measles run their course, or mumps, and then passes out of the system.

The reason of the prevalent belief of the connection between a common cold and consumption is, that cough is the distinguishing feature of both. Hence, whenever a consumptive gets worse, the almost invariable expression is: "I must have taken cold in some way, and yet I do not see how it can be so, for I have taken every precaution." So that, whenever the cough becomes worse, is more decided or troublesome, the invalid's inference is that he

has taken a fresh cold. This is a delusion, and in its practical bearings, is a fatal one, as it results in more continued confinement to the house, in order to prevent taking cold, and to the securement of an even temperature, when, in reality, an even temperature, a temperature of room regulated to a degree for months together, is as certainly fatal in any case of decided consumptive disease as we can readily imagine. In the reading of an age, we do not remember to have seen a single case described in medical publications, in which a regulated temperature did not end in death. So, the fear of taking cold, in the belief that such a cold aggravates consumption, effectually cuts off the invalid from the most important of all means of cure. For, *without a full and free exposure to out door air, regardless of all weathers, no case of consumption ever has been cured; while with it,* AND IT ALONE, *many cases may be.* Let the reader manufacture his own statistics on this point in this way. One person out of every six dies of consumption.

Of these, five have had bad colds a thousand times during their life, and here we have five thousand bad colds without a single case of consumption; and as to the man himself, he had a bad cold five, six or eight hundred times before, and under it all, he never became consumptive. And because one bad cold out of five or six thousand was reputed to have been followed by consumption, it is the slimmest of all arguments to make it the foundation of a conclusion, that consumption is originated in a bad cold. No theory ever worth a thought could stand upon a foundation like this, and since that theory originates a very general and practical and fatal error, we owe it to ourselves, every lover of truth, every humane man owes it to himself, to give the subject a stern and thorough investigation.

If, then, *Tight Lacing* does not directly originate consumption;

If *Hereditary Tendencies* do not practically make persons more liable to die of consumptive disease;

If *Bad Colds* do not originate consumption;

What are some of the more prominent and pregnant causes of a disease, under which there are suffering in England and Wales, every year, no less than seventy thousand human beings, and, no doubt, an equal number in the United States?

We have already seen that *Paleness, Emaciation and Debility* are symptoms which are always present in common consumption of the lungs; and, although these are not always indicative of the presence of consumption, yet it is a legitimate inference that, whatever causes these, is a sufficient cause for consumption; and, consequently, it is our duty to know all occupations, and callings, and pursuits, the intemperate prosecution of which inevitably induces, if persevered in, paleness, emaciation and debility. Let it be remembered, it is not designed to advocate the total abandonment of these pursuits, for they are useful and necessary; but to follow them only so far as they do not seriously impair the health. We know

of no calling of human life, which may not be pursued with impunity, which may not be pursued in such a way as to promote health, if done judiciously, wisely, moderately.

What, then, are some of the callings of human life which, in our own observation, give the pale face, the wasted flesh and the feeble walk?

Indoor employments, especially those which do not demand activity on the feet, supply much the largest number of victims to consumption, while those who are out of doors a great deal are almost wholly exempt, or if attacked at all, it is the result of a change of life, to an inactive or indoor employment, or to some unpardonable instance of thoughtless indifference, or some hardy recklessness.

Out of every hundred varnish painters, thirty-seven die of consumption. They live mostly indoors.

	Years.		Years.
Varnish Painters,	37	Blacksmiths,	9
Tailors,	14	Slaters,	9
Engravers,	14	Agriculturists,	9
Printers,	14	Butchers,	7
Clerks,	14	Tanners,	7
Polishers,	12	Candle Makers,	7
Plasterers,	12	Easy Circumstances,	5
Sculptors,	12	Butchers,	5
Stone Cutters,	12	Dyers,	5
Watch Hand Makers,	12	Bleachers,	5
	12	Watermen,	5
Carpenters,	9	Gardeners,	4

The influence which out door activities have on the general health accords with that had on consumption.

The average life of

	Years.		Years.
Stone Cutters is	34	Surgeons,	54
Sculptors,	36	Masons,	55
Millers,	42	Gardeners,	60
Painters,	44	Merchants,	62
Carpenters,	46	Clergy (Protestant)	63
Butchers,	53	Magistrates,	69.
Lawyers,	54		

By a careful examination and comparison of these tables, which are regarded as merely approximative, it will be seen that there is a striking correspondence between the causes of general disease and the causes of consumption; that persons who are out of doors most, and most active, live longest, and are most exempt from consumption.

In speaking of the causes of consumption it is useful to remark, that among those who are least liable to consumption are persons in "*easy circumstances.*" What a loud and impressive lesson is here read to humanity. What a strong reproof to the men and women who are working their very eyes out for gold; who day and night, summer and winter, are tugging, and striving, agonizing after money, who rob themselves of necessary sleep, who stint themselves of necessary food and clothing and comfort, to hoard up that which *perisheth with the using*, who work beyond their strength every day of their lives in their struggle after the greed of earth. These are people of *uneasy*

circumstances, and it is not they who are exempt from consumption, but those who are in easy circumstances, and being content there to remain, are in *easy circumstances* still. *To be in moderate circumstances, and take the world easy, that is the true philosophy of life.*

What a sad tale, that item about "*easy circumstances,*" tells of poor humanity! while they are almost exemptive of consumption, how forcibly does it speak to us of the converse as a cause. The uncertainty of to-morrow's bread! to not know where the next "*rent*" is to come from! to not know but in another twenty-four hours, one's family will be roofless! To lean day by day on the dagger of unrequited love, of misplaced affection, of confidence forfeited, of heart broken! To pine away in desertion, in hopelessness, in the consciousness that our life time has been a failure, and that it is too late to try again; to be young and all one's kindred gone, sister, brother, father, mother, all passed away; to be yearning for something to love and lean upon, but to meet indifference

and coldness and rebuffs; or to be old, the sad and sole survivor of a large kindred, the friends of our school time, the associates of our youth, the companions of riper years, the dear, dear children of our prime, of these not one left, departed all—not "*easy*" circumstances these, but terrible; and no wonder, is it, that under them, the heart and body too, pine away, and only find an end in the consumptive's grave.

We then have arrived at a great fact that depressing mental influences are a "*cause*" of consumption, while in connection with it the interesting and instructive truth presents itself, that while moderate bodily exertion out of door exempts from consumption, immoderate labor or comparatively inactive out door employment invites the disease. The sculptor, who stands at his stone, chisel in hand, in the self-same square yard for days and weeks together, and for hours at a time in the self-same, almost immovable stooping position, is one third more liable to consumption than the agriculturist, who is constantly changing the

position of his body, constantly bringing a large variety of muscles into exercise, and whose locomotion amounts to miles asunder every day. Nor is it less curious to observe that the gardener is one hundred per cent. less liable to consumption than the agriculturist; a sufficient explanation lies in the fact that his labor is more moderate, and uniform, attended with less anxiety and surrounded with the more pleasing associations which gather around fruits and flowers. The tastes of the man are compelled into exercise and his mind is drawn out, dozens of times every day in comparisons as to proportions, adaptations, appropriateness, and beauty, all pleasurable, all elevating, while the farmer's heart is eaten out by the two great cormorants, Season and Price. Did any man ever know a farmer who was not an habitual grumbler, who was not always ready with a too dry or too wet, too backward or too forward, too hot or too cold? We ourselves have known some, not many, who were habitually and hum-

bly thankful for whatever sort of weather a kind Providence thought proper to send.

Whatever renders the blood impure tends to originate consumption. Whatever makes the air impure makes the blood impure. It is the air we breathe which purifies the blood. And as, if the water we use to wash our clothing is dirty, it is impossible to wash the clothing clean, so if the air we breathe is impure, it is impossible for it to abstract the impurities from the blood.

What then are some of the more prominent things which render the air impure? It is the nature of still water to become impure. It is the nature of still air to become impure. Running water purifies itself. Air in motion, drafts of air, are self-purifyers. Thus it is that the air of a close room becomes impure inevitably. Thus it is that close rooms bring consumption to countless thousands. Hence all rooms should be so constructed as to have a constant draft of air passing through them. The neglect of it, murders myriads. A man of ordi-

nary size renders a hogshead of air unfit for breathing, consumes its blood-purifying quality every hour, so perfectly, that if a man could re-breathe a full breath of his own the next instant after its expiration without any intermixture with the outer air, he would be instantly suffocated. Hence sleeping in close rooms even though alone, or sitting for a very short time in a crowded vehicle or among a large assembly is perfectly corrupting to the blood. Close bed rooms make the grave of multitudes.

Among other causes of consumption are insufficient food or clothing; sleeping in basements or sitting habitually in damp apartments. A dog will become consumptive in a few weeks if confined in a damp cellar, especially if it be a dark one.

Hence the room which we occupy for the largest portion of each twenty-four hours should be the lighest, dryest, most airy and cheerful in the whole building.

As occasional causes of consumptive disease, there may be mentioned all suppressions, the

sudden driving in of all eruptions, such as measles, tetter and the like, the sudden healing up of sores which have been running for a long time, without intelligent medical advice, in carrying off the drains of the system in another direction. Many lives are thrown away by ignorant persons, in applications to old sores: they are elated to the highest degree in having "cured up" an ulcer, which the "regular doctors" had failed to do after months of effort, but they fail to note the after fact, that within a very short time the "cured up sore" has broken out again, or falling on the lungs, has laid the victim in the grave.

It is the province of the skilful physician to know when to let alone as well as when to act. To do little or nothing, is sometimes the highest wisdom.

THE NATURE OF CONSUMPTION.

If a bush or tree is pulled up by the roots, and turned upside down, the roots being cut off, close to the body, a good general idea of the *Air Passages* is presented. The end of the bush next the ground represents the part of the throat where the voice organs are, the body of the bush represents the windpipe, the branches of the bush represent the bronchial tubes, the leaves of the bush represent the lungs themselves; and as the leaves cover the branches from sight, so the lungs, which are nothing more than little bladders distended with air, hide the bronchial tubes. Here then, are four distinct parts of a great apparatus, each different in locality, and each locality the subject of a distinct disease, requiring different remedies and a different treatment. Liquid guano destroys the leaf, but gives life to the roots. Water does but little good if thrown over a tree, but saves it from dying if thrown on the ground about it. So

what would benefit one part of the air-passages, might be wholly unavailing if applied to another part. What would cure a disease of the windpipe, might destroy the lungs, or be perfectly useless. Thus showing how important it is to know certainly what the disease is, and where it is located, in reference to the great machinery of life, the breathing apparatus.

In the book called "*Bronchitis and Kindred Diseases*," 8th edition, these parallels are carried out minutely. Here it is sufficient to say, that when the disease is located at the voice organs, it is called *Throat-Ail* or chronic laryngitis. The common and well-known name of *Croup* is an affection of the windpipe. Bronchitis belongs to the branches of the windpipe; while consumption is a disease of the lungs themselves, destroying the little air bladders to which reference has been already made. Perhaps a parallel may illustrate more plainly.

Name.	*Locality.*	*Disease.*
Root,	Voice Organs,	Throat-Ail.
Body,	Windpipe,	Croup.

Branches, Air Tubes, Bronchitis.
Leaves, Lungs, Consumption.

Throat-Ail gives a change of voice.
Croup gives difficult breathing.
Bronchitis gives a stuffed-up feeling.
Consumption gives steady emaciation.

Thus it is seen that throat-ail, or chronic laryngitis, is a disease at the top of the wind-pipe, where the voice organs are, its distinguishing feature being some change of the voice. Occasional additional feelings and symptoms are a huskiness of speech; sometimes the patient can only speak in the slightest whisper. Conversation is attended with an effort. Sometimes there is a painful feeling about the "swallow," a hurting sensation. At other times there is a pricking in the throat. Now and then these sensations extend up along the side of the neck towards the ear. An entire indisposition to talk is not unusual, for it requires an effort, or may excite cough. In almost all cases there is an incessant disposition to heck and

hem and clear the throat, present sometimes even in the sleep.

A gentleman applied to us in eighteen hundred and forty-three in the last stages of simple, uncomplicated throat-ail; he could swallow no food; even liquids returned by the nose; the pain was terrible. He starved to death.

Croup is so common a disease among children, that it requires no description here; it affects the windpipe. As it attacks suddenly, most often in the night, and as an hour's time may be all the difference between life and death, it is proper to state the most reliable course to be pursued, *until a physician can be obtained.*

1st. Keep the feet warm by having a jug of hot water kept against them; let them also be well wrapped up in woolen flannel.

2nd. Have a bucket of water almost as hot as the hand can bear. Have two pieces of woolen flannel of several thicknesses, one being on the throat, while the other is in the hot water, renew every two or three minutes, until relief

is given, or the physician arrives. The water in the bucket must be kept hot by the constant addition of boiling water.

Bronchitis is a disease of the branches of the windpipe, which are the tubes, conveying the air from the windpipe to the lungs themselves. The distinguishing feature of Bronchitis, as above stated, is a stuffed up feeling. The eyes and nose water very much. There is a sensation of oppression. In fact, Bronchitis is a common cold, lasting for many days. But custom has given the name of "*Bronchitis*" to the symptoms of a common cold when they have become permanent. Properly speaking, this is *chronic bronchitis*, for shortness called "*bronchitis.*" The reader will do well to remember that "*bronchitis*," that puzzling name, that mysterious, that fondly hugged designation, pronounced so often, so glibly and familiarly by the deluded consumptive, is a common cold protracted. And as in a common cold, the cough is not the first symptom, not appearing sometimes for a day or two, and then becomes the

main feature: so the first symptoms of bronchitis are as above stated, but they end in a cough, which soon becomes the all-absorbing symptom, tearing and racking the lungs day and night, with scarcely any intermission sometimes, and in this, is strikingly different from consumption, for its cough is mainly at night and in the morning.

While, then, throat-ail is an affection of the voice-making organs, and croup is located in the windpipe, and bronchitis belongs to the air-tubes, which come out from the windpipe, as the branches of a tree come out from its body, diverging widely; so consumption is a disease which attacks the lungs themselves, answering to the leaves of the tree, the lungs being at the extreme points of the air-tubes, as leaves are at the extremities of the branches of a tree.

But it is of consumption that these pages mainly speak. No doubt some degree of minuteness will be acceptable to the great mass of readers.

Imagine each leaf of a tree to be a small bladder or air-cell, filled with air, reaching them through the branches which draw their supply from what passes along the windpipe, derived from without. These air-cells are of various sizes, from a pin head to a pea, and thinner than any paper we know of. All over these air-cells, like a vine on a wall, there are branches of blood-vessels, bringing the blood directly from the heart. These blood-vessels must evidently be very minute, and to pass along them with any degree of facility the blood must necessarily be very pure, that is, it must not be thick, must not have in it foreign matter, sediments, the wastes of the system, its impurities. Mush will not readily flow through a hose-pipe. If water was so filled with mud as to have the consistency of stirabout, all the efforts of our gallant firemen would be in vain. This idea is of such vital importance, theoretically and practically, that the reader is earnestly desired, before he proceeds farther, to mature it fully.

Of not less importance is it to remember a

familiar fact, that if a hose-pipe lays in a direct line, the water passes along with great ease and power, but if the hose are laid crooked and angular, even the purest water moves slowly.

If you take a common bladder, fully distended with air, and draw straight lines from its neck to the bottom, those lines will become very crooked, if a great portion of the air be allowed to escape.

In health, the lungs are fully distended. The blood-vessels are, comparatively speaking, in a direct line. The blood itself is pure, and from both causes, it courses along the channels of life with rapidity and ease.

The first foundations of consumption are laid in the want of full breathing; the consequence, instantaneous and inevitable is, that the little blood-vessels stretching along a distended air-cell, become tortuous, winding, doubling, thus retarding the flow of blood, and *retardation is death.* The moment the life-blood stagnates, that moment it begins to die, and in approaching actual stagnation, it becomes cor-

rupt, impure, thick. But more blood coming in from behind, the pressure becomes greater, the sides of the blood-vessels become distended and at last begin to yield, and there is an oozing through of the more liquid portions of the blood, in the shape of distinct atoms or drops, which as they ooze, become hard, as the gum does from a puncture of the bark of some tree; this oozed blood-particle, hardened, is the hateful TUBERCLE, the seed of consumption and death.

An atom ever so small takes up room, and millions of them amount to a great deal, hence the room, in the air-cells, already diminished by the want of full breathing, and further by the detention of the blood in the tortuous blood-channels, is still farther taken up by the hard tubercles, so that from the three causes, there is very little room for any air at all; thus it is that *shortness of breath* is never absent in any case of consumption. In fact, it is an early symptom, and comes on by slow degrees, so slow

as to be imperceptible; *it comes on months before any cough is noticed.*

But another result springs from the increased diminution of room in the lungs, caused by tubercles of all sizes from a white mustard seed upwards; they help to intercept the flow of blood along the veins and arteries, and the pressure from behind still continuing, the blood-vessels cannot bear the strain, and burst, pouring out the blood into the lungs, that is, bleeding of the lungs, spitting of blood, *the forerunner of death.*

Spitting blood is present in perhaps two-thirds of all who die of consumption.

When blood appears as a mere speck or drop or streak in the saliva, it is not a symptom worthy of notice. In any other form, it is the knell of death in men. In women, the mere spitting of blood, if during the periods, is no critical symptom; does not indicate the presence of tubercles necessarily. In men, it does. That is, when the blood is mixed up with the saliva, or comes clear, from half a teaspoonful at a

time to a quart, tubercles are largely present, and in about two years the man will die, unless this symptom is removed.

Spitting of blood relieves the over fullness of the lungs, and diminishes cough remarkably, sometimes. Thus it is that bringing up a mouthful or two at a time, at intervals, is a relief, and may protract life for several years longer than would have been the case had it not been a symptom. Women losing blood naturally and periodically, thus protract the disease indefinitely.

We have recorded the birth of tubercles as founded in a want of sufficient distension of the air-cells by full breathing, to give the blood-tubes a direct line of conveyance.

But it is important to observe that precisely the same result will follow, if the blood becomes thick, mush-like. The blood-tubes may be ever so straight, yet if the blood be thick with impurities or from being of an imperfect material, the blood-vessels will, if but moderately distended, allow the oozing through of its thinner

particles, and give rise to tubercle. If the distention is intensified, then they burst their sides, and there is *Hœmorrhage of the Lungs.* In plain English, spitting of blood.

Thus we have come to two great important practical facts:

The want of full breathing gives birth to tubercle.

The want of pure blood gives birth to tubercle.

And here we have the two universal causes of Consumption:

IMPERFECT BREATHING. IMPURE BLOOD.

Surely it will not be difficult to remember these two things. We thus can plainly see how it is that persons who sit a great deal become consumptive; and any one may apply it to himself in the various occupations of life, without any further specifications as to this branch of the causes of Consumption.

More time will be spent in considering the other great branch of causes, *Impure Blood*, be-

cause it is not generally understood what are the more general causes of impure blood, and they ought to be universally known.

The heart has two suits of rooms, one filled with impure blood, going to the lungs to be purified; the other containing the purest blood of the body, which having undergone purification and perfection in the lungs, has been returned to this other side of the heart, to be propelled therefrom, to the most distant portions of the human frame, imparting in its progress, renovation, restoration and life. The right side of the heart contains the impure, imperfect blood, while the pure blood is found in the left. But it cannot get from the right side into the left, without passing through an out-house, the Lungs, where the purifying process is carried on; and how?

We have seen that the blood is in the little branches of blood-vessels spread like a vine on the walls of the air-cells, the lungs, distended by air. Now, the blood does not come in actual contact with the air, the membrane of

these minute vessels, thinner than the thinnest paper, manufactured only in Heaven, by omnipotent skill for the express purpose, is between the air and the blood. But a most wonderful process goes on here; there is a passage of substances through these membranes, the life of the air, the oxygen, as we say, passes out of the air-cell into the blood in the blood-vessels, and the impurities, the death of the blood passes from the blood-vessel into the air-cell, and in a moment the dead blood is made alive, and the air so pure from without but a moment before, is now deadly. So the death of the blood and the life of the air pass through these membranes, as light passes through glass or as electricity along the wires. Thus the Lungs are the great 'Change of life—the market place where Vitality and Death change their wares, the air being the nobler of the two, for while it takes death from the blood, it gives its own life therefore, the savior of physical humanity.

Let the most careless reader note and feel

here, how impossible it is for the blood to be purified unless he breathes abundant pure air. The importance of breathing it constantly, is strikingly exhibited in the established fact, that every ounce of blood of the whole body is thus aired every two and a half minutes of our existence. Thus the breathing of a pure air for so short a time as two and a half minutes imparts purification and refreshment to the whole human frame. This explains the instantaneousness with which persons are revived when taken into the air after confinement to a close room or crowded apartment for some time.

Thus, when after writing, or reading, or sewing, in one position for a long time, and the whole body feels tired, we get up, stretch the body, draw a full deep breath and walk across the room a few times, there is a feeling of rest and refreshment comes over us which is most agreeable. Why? Because the full breath distends the air-cells, straightens the blood vessels, the blood passes onward, presenting itself as it passes, to the life giving influences of the air

in the freshly and fully distended air vessels. What madness it is, what deliberate suicide, to repress these yearnings of our instincts for the life-giving agencies which a beneficent Providence has thrown around us with such bounteous profusion: the Pure Air of Heaven!

But how does the blood become thus impure at the right side of the heart, before it goes for renovation to the lungs? There are two sources of impurity. A barrel of the purest water will be sadly defiled, if taken to the attic, and every floor in the house is washed with it, down to the cellar. The blood starts from the lungs pure and clean, it goes through the whole frame, washing out as it goes along, the particles of our body which have died since the last visit; for we are always dying, reader! Particles which have subserved their uses, and having answered the great end of their creation, must be swept away as the cinders from the grate or the ashes from the hearth. Thus the blood, so pure but two and a half minutes before, is now loaded with offal, and is deposited

in the heart, the great Clearing House of the body. So this body of ours is swept out, is washed clean every two minutes and a half of our existence. Like a magnificent steam engine requiring the constant attendance of the engineer, who if he does his duty, is all the time cleaning and oiling, so as to keep it in perfect working order, so is our body.

Does not the reader see, then, that not only is the want of full breathing a cause of impure blood, but that if the air he breathes is not pure when first breathed, it can no more unload the blood of its impurities as perfectly as it ought to have been done, than dirty water can wash a garment clean? You, who habitually breathe an impure, that is, confined air, for all confined air is impure, are a moral suicide. Hurry then, from your bed-chamber the instant of rising; hoist the windows of your sitting apartments, fling wide open your doors, divers times daily, even in the coldest weathers, and let out the death, instead of drawing it into your own system, to fester, and corrupt and rot you.

The other great cause of blood impurity at the right side of the heart, is the following:

We eat to live. What we eat is turned into blood, the object of that blood is two-fold.

First, to keep us warm. Second, to repair the wastes of the system. Washing these wastes away in the manner we have named, is a matter of secondary importance, as to the blood; it is rather an incidental work. To keep us warm and to repair, these are First Things.

The process of converting food into blood is as follows:

After entering the stomach, it is converted into a sweetish, whitish fluid in about two hours, when it is gradually passed out of the stomach along the intestines down to the vent of the system, receiving as it passes out of the stomach, drop by drop, the bile from the liver. In about four hours after eating an ordinary meal, the stomach is empty, and in another hour or two we begin to get hungry. Opening into the stomach and all along the intestines, there are multitudes of little agencies, whose office it is

to absorb, or withdraw what is real nutriment, from the passing mass of food, its essence. Some of it is ready to be withdrawn while in the stomach, other portions only become ready at various points along the intestinal passages, some only at the end. Thus it is that some elements of food are not converted into nutriment until long after having passed out of the stomach. These diminutive tubes convey their contents towards the great central tube of the system, just as the various springs, rivulets, creeks, &c., of any of our great rivers, flow together until all are united in one magnificent stream, which itself is finally emptied into the boundless sea. The heart is the great receiving sea of the myriads of nutriment-bearing channels of the human system. This nutrimental material enters the heart at the same time that another great river pours its contents into it; that river of blood which started from the heart a very few minutes before, and having washed out the body, delivers the defiled mass into the heart again, to be renovated, refined,

vivified. So that at any moment, the right side of the heart is industriously receiving two different kinds of fluid, the washings out of the body, and the imperfect nutrient material for blood, just as the Mississippi and Missouri pour very different waters together at their uniting point, soon mingling, however, into one homogeneous stream. The impure blood and the nutrient material soon coalesce, commingle and enter the lungs for purification, thoroughly mixed together. There meeting with the air, the nutrient fluid is in an instant converted into pure blood, and in the same instant of time, are the washings of the system converted into blood equally pure, by having had all the impurities abstracted at a breath. Thus we see, that in reality, our food does not become living, actual blood, until it has entered the lungs and been exposed to the life-giving influences of the air therein; hence we see that if air has not its life, that is, its purity, it is utterly impossible for the food we have eaten to receive that finishing stroke which makes it real, perfect

blood. And if not perfect, the system is imperfectly fed, and debility and disease are inevitable.

After the air in the lungs has given the finishing stroke, which makes pure and perfect blood out of the heterogeneous mass before described, this blood is sent to the great receiving reservoir of the system, the left side of the heart, and is sent by thousands of *distributing* pipes, or blood-vessels, to every fibre of the human frame, to be made into flesh, and bone, and joint, and ligament, wherever renovation is needed. And how minutely grand the process. The instant the air meets the impure and imperfect fluid mass in the lungs, it is converted into life, as instantaneous as crystallization, as quick as the very lightning. This life consists in forming a little boat or cell, like a Nautilus on the sea; in this boat is an atom of life-giving life, which is freighted along the current of the blood, until it arrives at its destined port; the instant of its striking, the vessel is broken, the living atom, as instantaneously as the needle to the

armature, bounds to its new home and is a part of the living man, in its turn to die and be washed away to make place for others. How wonderful is our life! How grandly mysterious, and how beautifully wise, is He who made it.

The reader has no doubt felt long ago in this narration, how doubly essential to human health is the pure air of heaven, for it alone can purify the blood; it only can make blood out of the nutriment of the system. How infinitely essential, how gloriously useful is PURE AIR AND A PLENTY OF IT, in making the human frame all that it ought to be—all that it was intended to be.

But if the food be imperfect, its nutritive essence must be imperfect, and no air, however pure in quality, or in quantity large, can make a perfect blood out of it. We thus arrive at a sweeping general fact, that in order to have a perfect life-giving blood, under the most favorable circumstances, the food we eat must be perfect.

The vegetables we cook must be fresh and

perfect of their kind. The meats we consume must be the untainted meat of healthy animals. And both vegetables and meats should be properly and well cooked, and no more.

But to return to the new-born *tubercle.* How does it destroy the lungs? In going into an apple orchard, some trees appear to be well filled with fruit, equally distributed. Other trees have bunches of apples in patches, and by reason of varied exposure to the sun, we observe apples ripened in one spot, ripening in another, and quite green in a third. So it is, if we could see the lungs of people. In some, tubercles are thickly and equally distributed over the lungs. In others they are scattered about, a patch here, another there, a third yonder. A patch ripening in the first place; just beginning to turn in the second; while in the third, they are young and hard, and may never be different. A blackberry patch is a good and useful illustration of this point. It is the key which unlocks all the mysteries of quackery. There is a truth here, which every con-

sumptive should understand, for there is more curative virtue in it, than in all medicine. It is wonderful how it has been lost sight of professionally. It is amazing how people won't see it. And the honest physician remains but a Cassandra still—a prophet, whose teachings, truth as they are, are wholly disregarded. But more of this in another place.

As an apple grows, it takes up more room, and soon touches its neighbor. Tubercles increase, meet, soften, and rot away together, eating up the lungs as they go. That is consumption. But what makes them grow, and what makes them soften and decay away together? The nascent crude tubercle may remain stationary for half a century; may be inappreciably hurtful; may and does remain innocuous for a life-time; may be as harmless to the system as powder is harmless, if fire is kept away. In proof of this,—a fact is stated—a fact of every-day occurrence in the dissecting-room. Out of fifty people, dead of other diseases than consumption, and being over forty years of age,

scarcely one will be found who has not more or less tubercles in the lungs. This important fact is conclusive as to one interesting point: tubercles do not necessarily destroy life, as they may lie dormant for a life-time.

But what causes the tubercles to enlarge, soften, and rot the lungs away? Instead of writing down a long list of specifications, some of which might be omitted and many forgotten, it is of prime importance to notice one effect, instead of a hundred different causes.

Tubercles enlarge and are softened by debility of body, long protracted. Whatever then, has a debilitating effect on the body, whether of a mental, moral, or physical nature, is the match which fires the magazine of life and burns it to ashes. Whatever keeps the body in a debilitated condition for weeks together, is capable of softening tubercles. If there be a great many tubercles of about the same age, as it were, any debilitating cause, acting for a comparatively short time, commences the decay, which, from the number of tubercles,

soon becomes general, and the constitution fails rapidly. This is rapid consumption. It is like a spark applied to a wooden tenement which has been standing for half a century—every inch of wood is a tinder-box.

The evidence of softening tubercle is the spitting up of mouthfuls of yellow matter, which falls lumpily or heavily on the floor, with uneven edges, just as if one had been chewing a rag or piece of paper somewhat soft, and thrown it on the floor. If spit in water, it sinks rapidly to the bottom, or if spit into a cup where there is but a spoonful or two of water, and the cup is tilted, the contents run rapidly from side to side. When an ulcer breaks or the lungs are decaying rapidly, the matter expectorated is not unlike thick rich cream.

A truth is about being stated, whose importance is such, that the whole civilized world should keep it in remembrance. As in a tree, there may be a single cluster of apples, so in the lungs, there may be but a single cluster of tubercles, and the remainder of the lungs may

be perfectly sound. Or there may be two clusters or a dozen; each cluster may be a large or a small one; or they may be of various sizes. The symptoms of a ripening cluster are, first, a slight unfrequent cough; then more decided, still dry; next a little mucus comes; soon a large and free expectoration of yellowish matter is observed. If the cluster be large, this yellow matter is not brought away fast enough, and it is reabsorbed into the system. This reabsorption—this mingling of the matter of decayed lungs with the blood again—gives fever, hectic, night-sweats. As soon as the decayed matter of tubercle is removed, the patient begins to get better; the cough has disappeared in great part, if not wholly, the appetite improves, strength returns, flesh is gained, and the man may live half a century.

Whatever was done remedially at the time when the matter was about got rid of, gets the credit of having cured a man in the very last stages of consumption. The ignorant administrator and the more happy recipient, are

willing enough to give the remedy the credit, and with all due formality a magistrate is sought, the declaration written, the hat pulled off, the bible procured, the hand held up, the head bowed, the deponent there affirming that

"I, John Lubberlie, was supposed to be in the last stage of consumption in the year 'forty-eight, suffering at the same time under a severe attack of rheumatism, liver complaint, dropsy, gravel, and cholera morbus. Simultaneously, also, I took the yellow fever, bilious colic, and small pox; the latter assuming the chronic form of scrofula, completely destroying my lungs, liver, spinal marrow, nervous system, and the entire contents of my phrenology. I finally got so low, that I did not know my brother-in-law when he came to borrow money. For three months I swallowed nothing but twenty packages of Kunkelhausen's pills, which effected an immediate cure in three weeks.

"My uncle, Bacchus Pottinger, was afflicted so long with the gout that his life became a burden to him. He took only four boxes of

said pills, and life was a burden to him no longer. Further deponent saith not.

"Sworn and subscribed to, &c., &c."

Or if the patient happened at that critical time to go to the South, or North, or do any extraordinary thing, or any silly thing, such as drinking mule's milk, or goat's cream, or tar water, or brandy smash; if he had slept in a pig-pen, or cow-house, or inhaled hot water, or cold alcohol, or any thing else, the thing last done, has the credit of cure; and thus it is, that although the very next person who "tried" the same remedy died under it, the report has gone abroad, and like the cork leg, couldn't stop itself, and is going yet. Thus the world is full of cures, and any man you meet can deliver at sight, half a dozen, any one of which cured a friend of his who was a great deal worse than you are. But to the crushing disappointment of multitudes, the experience is sadly uniform that "whatever it may have done for others, it has not availed for me."

If there be two or more patches of these

tubercles, another softens, as the causes of softening are applied, and the same routine is gone through, perhaps until the dozenth time, which being the last, he may live on, to die many years after, of some totally different disease; or if the constitution be not strong, the man succumbs under these repeated attacks, and passes away.

The practical uses to be made of this narration of undoubted facts are various and important: first, it is useless to take any thing without the advice of a regular physician, who must be acquainted with every constituent of the remedy, so as to know in what direction its curative agencies tend; second, do nothing which common sense, joined with professional science, does not indicate as rational and wise.

The reason of these inferences is, the wide difference between an antecedence and subsequence and cause and effect. It is clearly irrational to adopt any remedy, simply because it was applied and restoration followed its application. The scientific practitioner takes no

such grounds. It is not until after repeated experiments, made under every variety of circumstances, extending through months, and seasons, and years, giving a uniform result, that he lays hold of any remedy, but once laid hold of, he never rejects it for a single nor for a dozenth failure. Such is the difference between scientific medicine and quackery, between intellect and ignorance. It is only after many a long year's trial, that the skilful practitioner can be brought to say of any remedy, "I gave this, and it cured him." The charlatan speaks thus after the first trial, his ignorance sustaining his effrontery.

Hope is the highest remedy of the soul, the most efficient for the body. This Cluster Doctrine is a true groundwork for it, in consumptive disease. Surely it is Nature's remedy, for who among a thousand does not hope to the end, in consumption? The mischief lies in not making that hopefulness the ground of practical action. The consumptive hopes but does

nothing, and thus it is that by hope he lives and dies.

Some of the best medical minds in the world, men who have spent a quarter of a century in examining the lungs of the dead, state to us this important, every day fact, that few people die, after forty, who have not in the lungs, the signs of having had consumption, without ever having had the slightest suspicion of the existence of the disease, and who finally died of maladies having no approximation towards it in nature. These signs, are scars of various lengths, little excavations, or cavities or puckerings of various sizes; all very small it is true, but still showing the great fact, that decay once existed there, and that the lungs may perfectly heal after having been divided or broken, or pierced, as numerous cases bear witness in the perfect recovery of men who have been stabbed in thebreast, or shot through the lungs.

The great curative principle, to which the reader's attention is specially solicited, is this: In any attack of consumption, or its repetition,

the patient should hope it was the last cluster to soften, and that if he can only weather this storm, it may be the last, and life and happiness may be his, for long years to come. Too much attention can scarcely be paid to this idea, and we hope every invalid reader will sleep on it nightly, and make it the ground of active, strenuous effort for health, every succeeding day, even until life's close, for the truly brave die striving. This being their motto, they do, in these diseases often, very often, outlive the prognostications of ignorance and presumption, for it is only such who can peril a prophecy of recovery or death; they speak firmly, where the physician gives opinions with trembling on the tongue.

There is another practical fact, which it is difficult to refrain from mentioning here:

On the partial or complete recovery from an attack of consumption, do not, as you value life, intermit a single possible effort for maintaining the highest possible degree of health; keep it up, until a habit of health is establish-

ed, and even then, until the close of life, make it your study to live rationally, apportioning your eating to your exercise, as true wisdom dictates.

The symptoms of consumption have been described in a general manner. It is purposed under this head to speak of the far-off symptoms, which, if promptly treated, may eventuate in cure, with as much certainty as belongs to ordinary diseases. It is scarcely to be hoped that any attention will be paid to these, yet a book on this subject could not have claim to completeness of history without discoursing something on this head. It is certainly desirable, for it is highly practical, capable as it is, of making Consumption of the Lungs a manageable disease. But it is sadly feared, that it is to be the consummation of future centuries.

It is with consumption as it is with cholera, easily manageable in its first stages; in its last, utterly incurable. All men looked with horror on the Asiatic curse when it first visited our shores. When it was first described as sweep-

ing the world with death, it was represented to be as instantaneous as a plague or palsy, and without one single warning note, hurrying multitudes to the grave; and yet on more minute and scientific inquiry, it is an established fact, that cholera, when attended to, in its premonitory stages, is an easily controlled disease, and is now shorn of half its horrors.

So of consumption, if we took note of its far off symptoms, and would then enter upon a course of life wisely energetic, it becomes one of the most manageable of diseases. The important practical inquiry then arises, what are the earliest and most invariable symptoms of common consumption of the lungs?

Cough is not an early symptom of consumption, necessarily, for there are many cases on record, in which cough was not an observed symptom, until within two or three weeks of death, and on examination, the lungs presented a diseased mass, burrowed with cavities.

Spitting blood is not an early symptom of consumption, necessarily, for about one-third of

those who die of that disease, do not spit blood at all.

Among the very earliest symptoms of forming consumption, are combinations of the following; not all, perhaps, observable in any one case: A quicker pulse than ordinary, a paler face, easily chilled after eating, more readily put out of breath than common, less fullness of flesh than usual at the corresponding season of the year, an unusual feeling of unrest on getting up in the morning, a greater tendency to coldness of the hands and feet, every now and then a day passing without any action of the bowels, with a very bad taste in the mouth when first waking up in the morning; a cold is easily taken, is more frequent, and lasts longer and longer, until one cold runs into another, making the confirmed cough, so ominous of approaching ill.

It will be seen at a single glance, from these symptoms, that they all indicate one thing, and that one thing is at the bottom of every case of

consumption—*a want of vitality;* that is, a want of general vigor of system, of constitution.

But of all the things named, it will be more practical to select the two which are seldom, if ever absent, in any of the above combinations which result in consumption; hence it is important to be at some pains in stating them in their bearings. A quick pulse and a short breath pervade the disease from its earliest beginnings, during its entire progress, and down to its fatal end. Multitudes of lives might be saved yearly, if these two symptoms were promptly and wisely attended to. The importance of so doing, no language can adequately portray, and if it did, the people would not attend to it, with only here and there an exception. But a great truth is of small seed and of slow growth; yet that growth is certain, and its spread uncontrollable—the more so, as education becomes more general.

The PULSE beats about sixty-eight times in every minute of healthful adult life. The range is from sixty-six to seventy-two. When it is

below sixty-six, there is something at fault; when it is over seventy-two, during all the hours of the twenty-four, there is always disease; and if it continues so for weeks and months, there is the strongest ground for apprehension that consumption is approaching.

There are intelligent men in the profession who will not coincide with this statement, but it will be because they have not had the opportunities of observation.

Whatever may be said of auscultation, of plessimetry, of sounding, of expectoration, there is in none of these a guide so sure as the condition of the pulse, with the aid of a competent interpreter; more, it is worth, to such an one, all the other modes of determination put together. It is said that the physicians among some of the Orientals, are not allowed to see their female patients, the hand only being put out through the bed curtain, and by feeling the pulse, prescriptions must be made. If the powers of life are being pressed to death, the full, soft, slow pulse tells it in an instant;

if active, an actual destruction of organic life is taking place in the body, the inflammatory pulse, quick, wiry, angry, spiteful, at once raises the note of alarm. Every physician knows how gratefully the pulsation, as of a woolen yarn beneath his finger, strikes upon his perceptions, on some urgent call, and how troubled, if it gives the feeling of a quick vibrating, small wire. The multitude of shades of difference between these, carry with them their varied impressions, all highly instructive. In strongly-marked cases, however wan the patient may look, however hollow or fierce his cough, at first sight, an instantaneous feeling of the pulse is sufficient for the conclusion, "*You* have no consumption." But inasmuch as there have been cases of no appreciable activity of pulse, and even diminished pulse, where consumption existed, the wise physician will never pronounce an opinion on any one single symptom. In some cases of spinal irritation, for example, there may be a trouble-some hacking or hemming, and a quick pulse

for months and years, without any special disease in the lungs. Still, this one broad fact should stand out prominently as an instructive beacon to all:

A pulse steadily over eighty beats in a minute, for weeks together, is a forerunner of consumption.

The physician in his kindness or hopefulness may tell you that some persons have a high pulse constitutionally, hereditarily, or some other plausible reason may be given for its presence in you; but if you are wise, with a pulse among the eighties, you will set it down as consumption begun, and will act accordingly.

ACCELERATION OF THE BREATHING is never absent in any case of actual consumption. In the last few weeks of life a few steps put the patient out of breath, even if those steps be over a level floor. But long before this there was observed an inability to walk fast without considerable discomfort. In fact, a slow and measured tread is the symptom which first strikes the ordinary observer. The man him-

self may be scarcely an apparent invalid, except on close scrutiny. He may be lively in conversation, he may eat heartily, may have little or no cough, but any effort on your part to induce him to greater bodily activity, is instinctively avoided. At a still earlier period, one thing has been forced upon the attention of the patient: that he does not mount a pair of stairs with the same celerity as formerly. In days long ago, he could take two or three steps at a stride, and even feel the better for it when he reached the top; but now, such an effort would make him puff and blow inconveniently. At an earlier period still, there is an observable feeling of tiredness about the legs and knees on going up stairs, a feeling of weakness there, not known in earlier years, implying a want of bodily vigor, not pertinent to that stage of life.

It is to be hoped, that no one will haste away with the impression that a little feeling of fatigue in going up a pair of stairs, is a sign of consumption. This book is not written for

quibbling critics; it is written for the instruction of people of sober views, who can look at a subject steadily, willing to be informed, but unwilling to run away with either end of the subject, or precipitate themselves into the weakness of extremes.

But it is an instructive fact, that if this easiness of fatigue in ascents, be conjoined with the quick pulse, and be so for months in succession, it is an impressive warning of coming consumption, and millions would be saved, if it were heeded.

A man may be lazy, it may be summer time, or various other things may give rise to a transient exhibition of acceleration in pulse and breath, or they may arise from the mere habit of sedentariness; but there is one easy, decisive, infallable method of determining whether these symptoms are from transient causes, or from an actual change going on in the structure of the lungs themselves; and that is, by measuring the quantity of air which the lungs are capable of drawing in, at one deep, full,

free breath, that is done by the use of an instrument often seen in the street, "The Lung Measurer," or "Spirometer," as Mr. Hutchinson, of London, its inventor, names it. The first instrument of the kind ever made in the United States, was made for the Author of these pages, in 1847, since which time a number of eminent English practitioners have learned to employ them, and some few in this country. As a general thing, it has not found favor here, as it is expensive, is liable to abuse, and to the mass of physicians, the opportunities of making varied observations upon it, are not offered. Besides, it requires time and patience to classify the phenomena which it presents; and unless a man have a considerable practice of that kind, it does not pay, either in money or in data for scientific results.

In the Author's practice, then, the great preponderating indications of consumption are, accelerated pulse and breathing; no judicious practitioner will rely merely on the pulse, or any other two or three symptoms wholly, but

on the whole set of symptoms which any given case presents, together with the history of his life, his temperament, his habits, his hereditary tendencies and idiosyncracies, that is, peculiarities, of constitution.

The more obvious symptoms of consumption have been already sketched in a general way. So few persons recover from what is called confirmed consumption, that it was not considered profitable to enter into a critical enunciation and description of all the symptoms, real or imaginary, and in their various stages, degrees and progress; such a thing would materially detract from the practical, utilitarian design, which has been ever prominent. There is so little hope of clearing out the Augean stable of a confirmed consumptive, in any given case, that it is considered only worth while to direct attention critically, to the symptoms and stages which admit of a comparatively speedy and permanent arrest or cure.

The large majority of deaths by consumption, are out of married life, indicating the gen-

eral fact, that its victims are mainly the young, from twenty to thirty. As dying at twenty, or soon after, proves the actual existence of the disease in its forming stages, while yet in the teens, our hope lies in parental influence and intelligence, for then, they can enforce by authority, that course of life, most appropriate towards arresting and removing the disease.

THE EARLIEST SIGN OF CONSUMPTION.

A QUICK pulse and a short breath, continuing for weeks together, is the great alarm bell of forming consumption; if these symptoms are attended with a gradual falling off in flesh, in the course of months, there is no rational ground for doubt, although the hack of a cough may never have been heard. Under such circumstances, there ought not to be an hour's delay, in taking competent medical advice.

The vast mass of consumptives die, not far from the age of twenty-five; and this, in connection with another fact, that consumption is several years in running its course, suggests one

of the most important practical conclusions yet announced, to wit:

In the large majority of cases, the seeds of consumption are sown between the ages of sixteen and twenty one years, when the steadily excited pulse and the easily accelerated breathing, may be readily detected by an intelligent and observant parent, and should be regarded as the knell of death, if not arrested, and yet it is easily, and uniformly done, for the Spirometer will demonstrate the early danger, and the educated physician will be at no loss to mark out the remedy.

The quick pulse and short breath go together; rather "*easily put out of breath*," is the more common and appropriate expression. Ordinarily, persons breathe once, while the pulse beats four times; this is an approximative average, a general result. A person in health breathes seventeen times in a minute, and during that time, the pulse numbers sixty-eight strokes. A person decidedly consumptive, breathes from twenty to twenty-four times in a

minute, the pulse being proportionably rapid. A man whose pulse is among the nineties, with a breathing which corresponds, lasting for weeks, may with great uniformity be pronounced to have unmistaken consumption. And even here, the permanent arrest of the disease is quite probable, if the invalid could only be induced to act wisely, promptly, and energetically. But unfortunately such is not the case; nine out of ten are led away with the hope that it may be something else, that it is only Bronchitis, and this is confirmed in their own judgment by two facts, they have no pain in the breast, and they triumphantly strike upon it with their whole force, as a demonstration of the soundness of the lungs; and this other feeling, equally fallacious comes to their aid, the prominent trouble is a mere tickling at the bottom of the neck, at the little hollow there. They should remember that no Bronchia are there, it is the windpipe. Bronchitis is situated in the branches of the windpipe, and it begins to divide into branches

below that spot. That little hollow place is the telegraphic station, as well for the distant lungs as the Bronchia. The news comes from afar; that is the point of enunciation only. It is the news of mischief in the lungs, that something is there which requires removal, which is working harm and may breed death; and it does breed death. That very tickling at the little hollow, exciting cough for months together, is the forerunner of consumption in perhaps, at a moderate calculation, four times out of five. If a person could be amused at such a serious symptom, the physician would be, at the very indifferent, unconcerned air and tone and gesture with which the patient often announces this symptom, "Doctor, I have Bronchitis, I believe, a trifling little tickling at the bottom of the throat here; I wish you would give me something to take it away. I'm not sick at all, I feel as well as I ever did in my life, all except this kind of itching here." Upon a close cross questioning, a large amount of undiscovered truth will be elicited in almost every

instance, of symptoms dated many months and even years before. If then, a patient for himself, or for his child, has any apprehension of the disease, let the family physician be requested to notice the pulse with care and accuracy, at different hours of the day, not within half an hour of active exercise, or within two hours after a regular meal, and if the invariable report be preternatural excitement, there is ground for alarm, in proportion to the intensity of that excitement.

It has been seen how invariably the derangement of pulse and breathing go together, showing that the cause is one, and the locality the same, the Lungs. As the heart is always pumping its blood into the lungs, to present it to the action of the air, in order to render it fit for vital purposes, the faster the pumps work, the faster must the lungs work. But what makes the heart work faster? The blood in it is more impure than natural, that is, more thick, it does not flow with ease, it is sluggish, each motion of the heart does not get rid of

its proper quantity, and it must work faster or drown; as the refractory poor in the work-house, who are unwilling to work, and are placed in a large tank or tub, into which water is pumped, and they have the alternative of pumping with another pump, or drowning. This thickened nature of the blood, makes itself felt in the lungs, in the same way as in the heart, with the additional effect of the formation of tubercles, and these taking up more room in the lungs, leave less room for the requisite amount of air, the person must breathe faster and consequently shorter, the result being to aggravate the difficulty. Thus it is that consumption does not get well of itself, like many other diseases, any more than a fire will go out of itself, until it has left the building in ashes, unless for the want of one of two things—a want of burning material or an artifical barrier. But in consumption, there is material, as long as there is a body; and how it is destroyed, until nothing is left but skin and bone, we need no information! The only rem-

edy then, is the artificial barrier. *What is it?*

But before replication is made to that inquiry, it is practically useful to go another step more remote in our inquiries in the way of a reminder. What makes the blood thus preternaturally impure in the heart, so as to lay the foundation for such vast destruction? This is answered in preceding pages, beginning at fifty-seven, where it is shown that the fundamental origin of impure, consumption-originating blood is, imperfect nutrition and the habitual breathing of a still atmosphere indoors. And let it be painted before the mind's eye in living light, that either of these causes can, alone, certainly originate consumption, however wholly and completely the other may be absent. That all our care as to our food will not save us from consumption, if we habitually breathe a confined air. Nor will an active outdoor life save us from consumption or other fatal disease, if we live upon improper food, or habitually eat more of the best food in the

world, than the digestive functions can turn into pure nutrient blood material.

Here then, we are brought square up to the important inquiry, the prevention, the permanent arrest, or lasting cure of consumption. It is found

"IN THE FOOD WE EAT—IN THE AIR WE BREATHE."

A perfect digestion of wholesome nutritious food, and a habitual breathing of out-door air, under circumstances of proper bodily activity, are competent to cure consumption, from its first beginnings to its last stages, that is, the stage of actual decay of the lungs.

But as very few, in the latter stages, possess the energy requisite to secure the amount of out-door activity, necessary to the proper digestion of substantial food, we must go back to a point where we can secure the intelligence of the parent, acting authoritatively over the child. There must be Light and Force. There is power in concentration. And it is of interest to inquire, to which of the two causes of

blood impurity, is the origin of consumption most attributable? Then, by directing most of our energies to that one principal cause, we may act more efficiently. A stream of water puts out a fire, if played on one spot, but may be wholly unavailing, if thrown over the whole building.

The consummating act of Creative Power was to make man. The consummating act of Infinite Beneficence, is his preservation. We evidently were made to people the globe; wherever we live, we must subsist. Thus we find that the stomach makes out of all things, one thing, a fluid mass, which does not materially vary in color, consistency or nature, whatever we may eat. So that in a modified sense, we can, in health, derive nutriment from almost any thing we can swallow, from the lion to the worm; from the eagle to the insect; from the tree bud to its root, whether leaf or fruit, or bark or wood. Hence then, we come to an important practical fact: In consumption, a man may eat almost any thing, if judicious as

to quantity. Thus it is, that uniformly, we have, in our own practice, *as a general rule*, given the broad direction: EAT WHAT YOU LIKE, and which is not followed by any uncomfortable feeling within an hour or two afterwards.

It is a truth which should be kept sight of in all human maladies, that great Nature is our safest and wisest Teacher, and with an almost unerring instinct creates in us a desire for that kind of food, which contains in it those elements which the body most needs at the time. An instructive illustration, occurring within a few years, may not be out of place at this point, as serving to impress an important truth on the mind:

A girl fell down a flight of stairs, receiving an injury from which it was thought she would not recover. But with the exception of hearing and sight, she did recover. For some weeks her appetite called for nothing but raisins and candy, then for several months, nothing but apples were eaten. At a later period,

she commenced eating maple buds, since which time she has nearly regained her former health, and at the end of three years, her sight and hearing were restored.

We knew a child, twelve months old, abandoned to die by several of the most skilful physicians of New York, from teething and attendant summer complaint. As a last resort, it was sent to the sea shore in a two hours journey; on arriving there in a cold raw afternoon of August, the only attainable thing that seemed at all suitable, was a bowl of boiled milk, which she took ravenously, and would take nothing else for a week, improving from the first hour, and at end of a year, is among the heartiest and most rugged of children. And to make the prescription more impressive, having nature still on our side, we say to those under our care:

Let no man's appetite be a guide for your stomach; but only eat what you crave, even if it be a piece of pound cake or sole leather; eat it in great moderation first, so as to be on the

safe side, and gradually increase the quantity. On the other hand, never swallow an atom which you do not crave, for nothing nor nobody. A pig would not so violate nature. It should strike us as one of the most reasonable of inferences, that the stomach would most easily digest that which it most eagerly craved. There are morbid and unnatural cravings, but these are exceptions. We are speaking as to general rules, here and elsewhere in this volume, and it will help the reader to a more truthful appreciation of the principles advocated in these pages, if this distinction is kept clearly in view.

If then, in the two great points of digestion and out door activities, the former may be, to a considerable extent lost sight of, as being, under a wise arrangement of providence, able to take care of itself, we naturally throw our whole attention to the other and only one great remedial means in consumptive disease, which is—

OUT DOOR ACTIVITIES.

Any train of argument may look beautifully conclusive, until a missing or unbelonging link is discovered; the removal of the latter or the replacement of the former, makes sad havoc sometimes, of splendid theories. But when facts coincide with theories, in the management of consumption, there is a triumph for science well worthy of being recorded. And we are led to the inquiry:

DO OUT DOOR ACTIVITIES CURE CONSUMPTION?

If in answering this important question, we gave cases coming under our own management, they might be questioned as to their authenticity, by reason of our personal interest in the same. So we will first give a history or two from undoubted medical authority.

EDENTOWN, N. C., *February*, 1830.

Dr. PHYSIC, *Philadelphia*—DEAR SIR:

In the month of April, 1812, after having been extremely reduced by an attack of bilious

fever, I was seized with a cough, which continued, with great obstinacy and severity, until the month of November, when decided symptoms of Phthisis (consumption) began to make their appearance. I had every evening an exacerbation (recurrence) of fever, preceded by chilliness, and succeeded by copious perspiration. My cough began to be less painful, but was attended with an expectoration of mucus, mixed with pus, (yellow matter.) Before this complaint came on me, I had accepted a surgeon's commission in the army, and was stationed at Tarborough, about seventy-five miles from this place. In the month of December the part of the regiment which had been recruited, then having been ordered to Salisbury, it became my duty to repair to that place.

"Accordingly, about the middle of the month, in the situation I have described, I set out on my journey.

"In two days I reached Raleigh, without having experienced any material change in the symptoms of my complaint. During my stay

in Raleigh, the disease increased every day, so that I was obliged to remain there nearly a week, at the expiration of which time I had almost determined to retrace my steps, return home, and take my station among the forlorn and despairing victims of this unrelenting malady.

"But reflecting deeply on my situation, and recollecting that scarce a patient in a thousand had been known to recover from the disease after having been confined to bed by it, I was resolved to resume my journey, and to reach the place of destination or perish on the road. It will be impossible for me ever to forget the effort I had to make in pursuing this resolution. On a cold and blustering morning about the 20th of December, weak and emaciated, having been literally drenched in perspiration the night before, I ascended my gig and proceeded on my journey. The first part of my ride, this day, was excessively irksome and fatiguing. Every hovel and hamlet on the road seemed to invite me to rest, and to dis-

suade me from the prosecution of my undertaking. Often and anxiously did I wish that my disease had been of such a nature as to allow me to indulge in the inclination I felt, to desist from motion. But I continued my ride for three hours, when I found it necessary to stop for a little refreshment. While dinner was preparing, I lay down on a bed to rest. It was, perhaps, an imprudent act. Never was a bed so sweet to the wayworn and exhausted traveller, as was this to me. I lay on it for an hour, wrapped, as **it** were, in elysium. When summoned to dinner, though sleep was fast stealing on me, and inviting me to be still, I arose and attended, and after having made a very moderate meal of very common country food, I resumed my ride, and at night, about half past six o'clock, arrived at Hillsborough, which is distant about 36 miles from Raleigh. The inn to which I had been recommended was unusually crowded, and I had to accept of a room that was out of repair, the window-sashes rattling in their casements, and the wind pass-

ing through the sashes in several places. In such a chamber, at such a season, and in the situation already described, was I quartered for the night. To my surprise, however, I had a better night's rest than I had had for several weeks, and less perspiration, and coughed less than I had for a month before.

"In the morning, considerably refreshed, I proceeded on my journey, and travelled in a foggy misty atmosphere full 40 miles; the next day about 35, and on the 4th day about 12 o'clock, I arrived at Salisbury. On my arrival, I heard it mentioned as a matter of astonishment, that a man in my situation should think of travelling in the cold and inclement season of winter; much more astonishing that I should venture to approach the mountains at such a period. But I had taken my resolution, and was determined never to relinquish it while I had power to walk or ride. The regiment to which I was attached, was encamped about four miles from the town of Sailsbury. To this place I tasked myself to

ride twice every day, a duty I regularly performed in the coldest weather until I left the service.

"Early in January the officer in command received orders to repair with his regiment to Canada. While preparations were making for that purpose, believing that such a climate would be too severe for me, and that I must of course soon cease to be useful to the Government, I addressed a letter to the Secretary of War, soliciting permission to retire from the army. This request was promptly and kindly granted to me. In February, 1813, I commenced the practice of my profession again in this place, and continued to attend to the most laborious duties of it at all times of the day and night, in rain, hail, snow, storms, and sunshine, whenever I was called on, for eighteen months.

"At the end of that time, I had lost my hectic fever, night-sweats, purulent expectoration, and my cough had nearly left me; my chest had recovered its capacity of free and easy expansion, and the ulcers in my lungs

had entirely healed. Many who read the foregoing statement, will no doubt be curious to know what medical means were used as auxiliaries in the cure of this very alarming state of disease. It would not be in my power to satisfy curiosity on this point were it a matter of any importance, which I conceive is not the case, *the complaint having been cured by hardy, invigorating exercise, continued without interruption in every variety of temperature and weather.*

"That palliatives of different kinds were resorted to at various periods, must at once be supposed, but I do not consider it a matter of consequence to name them, as they were such as would readily suggest themselves to physicians of every grade of skill or intellect, and never produced more than a temporary alleviation of symptoms. Perhaps it may be material to state, I never used opium in any form whatever, and that I never incautiously wasted the resources of my constitution by depletory, or debilitating means. When symptoms of high arterial excitement occurred, which would

sometimes be the case, it was my practice to abstain from strong, high-seasoned food, from all fermented and spirituous liquors, and from active exercise until they subsided. By this negative mode of management I generally succeeded in removing inflammation without materially impairing the energies of my system; and on the increase of the purulent discharge, subsequent to such inflammatory appearances, I betook myself again to my exercise, and ate and drank everything I wanted. I always found that the inconvenience produced by a full meal, yielded very soon to horse exercise, and that I generally coughed less while riding than at any other time. The hectic paroxysm was generally interrupted, and sometimes cut short by a hard ride, and often, very often, during the existence of my disease, have I checked the exhausting flood of perspiration, and renewed my strength and spirits, by turning out of bed at midnight and riding a dozen miles or more; many a time, too, have I left my bed in the early part

of the night, wayworn with coughing, restlessness and sweating, for the purpose of visiting a patient, and after having rode an hour or two, returned home and slept quietly and refreshingly for the remainder of the night.

"Another thing which I remarked in the course of my experience in the disease was, that some of the most profitable rides I ever took were made in the coldest and most inclement weather, (air dense and plenty of oxygen for assimilation,) and that scarcely in any situation did I return from a long and toilsome ride, without receiving a sensible amendment in all my pulmonary complaints. In short, sir, were I asked to state in a few words the remedy which rescued me, I should say it was a life of hardy exercise and of unremitting toil, activity, and exposure. With pectorial medicines, or those articles or compositions denominated expectorants, I seldom meddled in my own case; without opium, which from a constitutional peculiarity, I have not been able to take for many years I found them too debili-

tating; and with it, had I been able to use the article, I should not have been disposed to take them, lest their effect in disposing to rest and inactivity might have operated against the course I had prescribed for myself, and from which I expected relief.

"It remains for me to mention another agent which I think excited a very curative influence upon my disease, and that is singing. In first using this remedy it was my custom to sing in a low tone, and not long at a time, so as not to occasion much pulmonary effort. But by degrees I became able to sing in the most elevated tones, and for hours together, allowing myself only such intervals of rest as the lungs required to obviate injurious fatigue. So long and so frequently did I repeat this act in the course of my disease, that the exercise of singing became so strongly associated, that as soon as I mounted my horse or ascended my chaise, I found myself humming a tune, and often in my lonely rides through the country, at late and unseasonable hours of

the night, have I made the woods vocal with the most exhilarating music. Singing seemed always to have the effect of clearing the bronchial passages, of opening the chest, and of giving a greater capacity of motion and expansion to the lungs. [The Doctor was killed by accident, in 1850.]

"Yours, etc.,

JAMES NORCOM."

Dr. Norcrom mentions a case as having occurred in 1810, which in 1830, twenty years later, was wholly free from any disease of the lungs. All this patient did, was to ride ten miles a day, gradually increasing to twenty miles a day, and by a continuance of exercise, was eventually restored to perfect health. All the medicine this man took was tincture of digitalis; but as it is now generally conceded that this remedy is worthless in consumption, the cure must be attributed to the exercise, just as the following case as given by Dr. Stokes, whom we have personally known at his own home in Dublin; and whom we found

to be, as is universally accorded by the profession, among the very foremost of living medical minds. The case was first reported in one of the British medical periodicals in 1854, and republished here in April of the succeeding year.

"Some years ago I saw a gentleman who came to town laboring under all the symptoms of well-marked phthisis. The disease had been of several months' standing, and the patient *was a perfect picture* of consumption. He had a rapid pulse, hectic, sweating, purulent expectoration, and the usual *physical signs* of tubercular deposit, and of a cavity under the right clavicle. I may also state, that the history of the disease was in accordance, in all particulars, with this opinion. I saw this patient in consultation with a gentleman of the highest station in the profession, and we both agreed there was nothing to be done. This opinion was communicated to the patient's friends, and he was advised to return to the country. In about eighteen months afterwards, a tall and healthy-looking man, weighing at least twelve

stone, entered my study with a very comical expression of countenance: "You don't know me, Doctor," he said. I apologised, pleading an inaptitude that belongs to me for recollecting faces. "I am," he said, "the person whom you and Dr. —— sent home to die last year. I am quite well, and I thought I would come and show myself to you." I examined him with great interest, and found every sign of disease had disappeared, except that there was a slight flattening under the clavicle.

"'Tell me,' said I, 'what have you been doing?' 'Oh!' he replied, 'I found out from the mistress what your opinion was, and I thought as I was to die I might as well enjoy myself while I lasted, and so I just went back to my old ways.' 'What was your old system of living?' said I. 'Nothing particular,' he said, 'I just took what was going.' 'Did you take wine?' 'Not a drop,' he replied, 'but I had my glass of punch as usual.' 'Did you ever take more than one tumbler?' 'Indeed I often did.' 'How many: three or four?' 'Ay,

and more than that: I seldom went to bed under seven!' 'What was your exercise?' 'Shooting,' he said, 'every day that I could get out.' 'And what kind of shooting?' 'Oh! I would not give a farthing for any kind of shooting but the one.' 'What is that?' 'Duck shooting.' 'But you must have often wetted your feet.' 'I was not very particular about the feet,' says he, 'for I had to stand up to my hips in the Shannon for four or five hours of a winter's day following the birds.' So, gentlemen, this patient spent his day standing in the river, and went to bed after drinking seven tumblers of punch every night; and if ever a man had recovered from phthisis he had done so when I saw him on that occasion. Suppose now that he had been confined to an equal temperature and a regulated diet, and had been treated in all respects *secundum artem*, what would have been the result? Any of you can answer the question. In point of fact, this very treatment had been adopted during the first three months of his illness, and his re-

covery may be fairly attributed to the tonic and undepressing treatment which he adopted for himself, and which his system so much required, to enable him to throw off the disease."

In this case of Dr. Stokes, it should be remembered first, that he is one of the best judges of consumption in the British nation, and that he considered it hopeless of cure. We must also in this, as well as in the case given by Dr. Norcom, attribute the cure to the exercise in the open air, and not to potations of punch. We have had, in our own practice, a variety of cases similar to the above, and complete and pemanent recovery took place without resort to digitalis, or whiskey, nor to an atom of nauseants or alcoholic preparations of any sort. It can not fail to strike the reader with peculiar power, that when under a certain variety of treatment a person recovers from a particular disease, but that in that treatment one element is always present largely under all circumstances, while as to the other elements there is great diversity as to combination, as well as

to their very nature, we are obliged to conclude that restoration depends on the one large ever present element, and that the other elements, various in nature, quantity, and combination, are without any material efficiency.

A. P., a lawyer poet of some renown, a native of New England, a sixth child. His parents had died of consumption, all his brothers and sisters as they approached the age of twenty-one, paled away and died of the same disease. No one of his neighbors looked for any different result as to him, and beginning to grow feeble in his twentieth year, and being the last of his family, with dear associations around the home of his childhood, he, in utter recklessness, penetrated the forests of Arkansas, lived a hunter's life, camped out for weeks and months together, and now, at the end of twenty years, and in perfect health, weighs over, at our last report, a hundred and seventy-five pounds.

Gregg, the author of "Commerce of the Prairies," for some months preceding 1831,

could scarcely walk beyond his chamber, from a complication of chronic diseases, unable to ride on horseback, he left Missouri for Santa Fe, in a carriage, could saddle his own horse in a week, and at the end of a quarter of a century is, we believe, an official, under our Government, in some of the islands of the Pacific Ocean.

On the tenth of June eighteen hundred and forty-eight, R. B., aged twenty-eight, slender, six feet high, lacking half an inch, a New Orleans merchant, called upon the author for medical advice. He had weighed one hundred and sixty pounds, now one hundred and eighteen, pulse one hundred a minute, breathing twenty-five, most drenching night-sweats which nothing could control, pain in the breast. There seemed to be a large collection of matter in the hinder part of one lung, and steadily accumulating; the pain became incessant, and almost insupportable. His cough was constant. He could not cough without pain. He had piles so badly that he could not sit down

without pain, while the pain in his breast would not allow him to lie down in any natural position. He literally staggered across the floor when he attempted to walk. He could get no rest at night, and we began to fear for his mind.

Under all the circumstances of the case, we advised him to start instantly for Canada by railroad, so as to get there at once, and then to travel on horseback until he got well, and to correspond with us in the mean time as to modifications of treatment in his changing condition.

He reached Niagara Falls in safety, but on his arrival had a leg bone fractured by the kick of a horse. To show his own views of his condition he wrote: "I hope to spend the few days I shall live out here, in making a perfect preparation for that place where our state is invariably and forever fixed."

Six months later I met a gentleman in the streets of NewOrleans so much like my former patient in general features and form, that I

thought him a brother, but it was the man himself, just returned in a ship from New York. He seemed in every respect well. He was one of the most grateful of men. In the language of a member of a mercantile firm, who had introduced him to me, his recovery seemed "almost miraculous."

D. H. called for advice July tenth, eighteen hundred and forty-four. Pulse ninety-two, constant pain in the breast, had frequent spittings of blood, as much as a pint at a time, with various correlative symptoms.

In endeavoring to find out his business relations, so as to adapt the advice to them as far as practicable, I found he could change his present occupation, and obtain the office of Sheriff; which, among other things, I advised him to do by all means.

Some six years later he wrote to me voluntarily, that he considered himself in perfect health. That he had done enough to kill a dozen men, had ridden through the country day and night, winter and summer regardless

of all weather, after having to walk for miles in slosh and snow half leg deep, and not only did nothing seem to hurt him, but he got better in spite of his exposures.

David Brainard, the great missionary, while a student at Yale College in seventeen hundred and forty-two, was expelled for what he considered an unjust cause; still it had its depressing effect upon the mind, while his body, exhausted by repeated hemorrhages from the lungs, seemed to be sinking under the general disease. But determining to be useful, he obtained permission to preach, went among the Indians, lived twelve months first in a wigwam of his own making, and then in a cabin, and all the time with returning health, but unfortunately returned to civilized life and its habits, his symptons returned, and he died of consumption towards the close of seventeen hundred and forty-seven. There is but little doubt that a continuance of Indian life would have wholly restored him.

A few years ago a gentleman was declared

by the best and most skilful examiner of the lungs, to have partial decay in the right breast, with the ordinary attendants of night-sweats, distressing cough, spitting blood, emaciation and debility. On consulting me, I advised him, as the only certain mode of recovery, under the circumstances, to purchase a farm in the West, and convert it into an extensive fruitery. This was in September. He at once began to carry out our suggestions, and without wearying the reader with minute details, he wrote us from his Western home late in November: "I could not have believed that so great a change could have taken place in so brief a period. I have superintended the setting out of some two thousand fruit trees, working more or less myself all the time, sometimes standing on the ground for hours in a drizzling November rain, with an umbrella. The roof of my cabin is defective, so that wherever I place my head, and there is a leak anywhere, it is sure to find me out."

And, most marvellous, with all this improve-

ment he returned to his family in Philadelphia to spend his Christmas time, without consulting me. I wrote him at once, "You have made a great, if not fatal, mistake. I advise you by all means to return at once to your occupation in the West, and remain there until perfectly restored." And such was his determination. But, unfortunately, not being under any pecuniary necessity to labor, having nothing to do but to eat and drink, and loll about on chairs and sofas, he soon began to imagine that the weather was too cold, and that he would defer it until spring. The second and the third time did he try the out door life with surprising results, but with amazing infatuation he lingered around home, and all the symptoms returned, with aggravated power, and on going to the out door activities for the fourth time he found that all his recuperative power was gone, there was nothing to build upon, and he died. He was our brother.

On the twenty-fourth of April, eighteen hundred and forty-nine, D. W. M. wrote from

Georgia for medical advice. The prominent symptoms were hacking cough, soreness in the centre of the breast, quick pulse, cold extremities, constipation, narrow chest, from a consumptive family.

This case was brought to remembrance by a letter, dated January 18th, 1856:

DEAR SIR,—I frequently see in the papers extracts from "Hall's Journal of Health." The pieces sound like an old benefactor of mine some years ago. If you are the same man, I can say something of your system of treating pulmonary diseases, which will be of much service to the afflicted, and of interest to you. I have been raised from death to perfect health. If you are my physician you will remember my case. I am at my old trade of bills and answers, and have no thought of turning doctor. Yet I am disposed to think that if I were to turn my attention to the curing of pulmonary ailments, I could have some success from the light which you and my own experience have given me.

The great trouble in the practical operation of your system lies in the obstinate indifference and total want of thought of most invalids. It is next to impossible to get people to accept the truth that their own reason and heroic per severance in the employment of remedial means, must co-operate with the physician. The vast world of human beings are mere machines. They are deaf to all the whispers of nature. Men are now as they were at the foot of Sinai, believe in no Divinity unless it assumes a visible and tangible form. If they could be prevailed upon to think a little, they would see that oils and inhalations and nostrums can never expel a disorder which comes from physical inaction and the want of pure air. I am indebted to your súggestions for the little common sense I have, in relation to the preservation and restoration of health. I have never ceased trying to impress upon other sufferers the truths to which I owe my life and the enjoyment of its blessings. But I need not say to you that my lectures are mere sound

to most persons. They may be willing to assent to the truth, but when it comes to acting in a way not prescribed by custom, they are, like monkeys, apt enough to do like others around them, but incapable of original thought and action.

I have seen no man outside of a coffin who was as low as I was, several times since I received your prescription. I have followed your advice till I got well, and then relapsed through imprudence, and want of thought. At last, I saw that the next relapse would put me beyond resuscitation, I began to think to despise custom, and to follow nature. I am now restored, but do not cease to work.

But in spite of the insanity of the suffering world, I trust you will continue to find a few favored spirits who will joyfully accept your light, and return to health and happiness. Pardon me for thus boring you, and also for feeling towards you as a brother, certainly as your friend."

The above letter is valuable—every line of

it is suggestive; it was volunteered, not written for pay or publication. Not written in the excitement of the first month's improvement, nor when it was undecided whether the benefits were reliable and permanent, but after seven years' testimony to a solid improvement, a permanent restoration. This communication is valuable also, not as being the production of John Smith, "his mark," or of some downtrodden child of poverty, whose heart is carried away with gratitude for the slightest attentions, the more impressive from their infrequency, but it is the spontaneous expression of a professional man, of a lawyer, whose talents have made for him a name and a fortune. If there is any one practical truth more important among the many than another, it is this: The continuance of remedial means until long after the health seems to be fully restored. It was the neglect of this, which proved fatal in the case preceding this last.

The mode of treatment in this case was first, the use of the ordinary medicines em-

ployed by educated practitioners to restore the digestive functions, and the circulation, to their natural condition. This was done in a short time, and then, and after, the *only* means were out-door activities, with the usual attention to the daily habits and practices of life. On the fifth of July, eighteen hundred and fifty-six, I saw this gentleman for the first time. He reported himself to be, and appeared to me to be, in the enjoyment of good health.

At this moment, a case occurs to me of a young lady, who made application some years ago for medical advice. The predominant symptoms were cough, thinness of flesh, a pulse of over a hundred, and a breathing of over twenty-six in a minute. An only daughter of a family, with whom a whole community sympathized, it became a case of unusual interest. Nothing that I could offer as an argument, could remove from the mother's mind, that it was not consumption. It was spinal disease. Her medical advisers had insisted upon walking and horseback exercise, and riding in a car-

riage, all which she had endured with heroic fortitude, even when, as often as she went out, she returned home almost fainting with pain. These inappropriate exercises only aggravated her disease, and now at the end of four years, she has not known one waking hour free from suffering, and thousands, yes, thousands of these hours, have been hours of agony.

Some heart affections give many of the symptoms of consumption. A lady of literary reputation called on me about eight years ago, with cough, and other symptoms of an affection of the lungs. I considered it a heart disease, and declined prescribing. She made application to a very distinguished medical writer. She died in a week. He told me afterwards, that his treatment had precipitated her death.

But it is not one case in a multitude, where consumption is simple; that is, where there is only cough, as the overwhelming symptom. Most generally, there are complications of costiveness, pain about the chest, white or furred tongue, or insufferably bad taste in the mouth

of mornings, indicating imperfect digestion and nutrition; all of these symptoms must be removed by medicines judiciously administered, so as to prepare the system for receiving the highest benefits from the prescriptions.

Then again, grave changes sometimes take place in the progress of the complaint, requiring not only a transient, but total abandonment of all exercise.

In other cases there are peculiarities of constitution requiring a modified treatment.

In some instances, acute symptoms arise in which every step a man takes only precipitates death. A kind of continued looseness of bowels is a very common symptom in some stages of consumption, which, if aggravated by exercise, will be speedily followed by results similar to those of cholera. In fact, the immediate cause of death in consumption is not unfrequently a wasting *diarrhœa*, which sweeps away life in a few days, when the event might have been postponed for months, and in some cases indefinitely, by the judicious administration of the sub-

nitrate of bismuth, or some of the various other remedies familiar to the educated physician.

One of the most important of all items is to secure a constant, perfect digestion; and although out-door activities might do it in time, yet weeks and months of time, of momentous value to the patient, may be often saved by the judicious administration of a single pill, or even by a mere change of food, as to quantity, quality, or mode of preparation. I was called to a man once who had been sick for a year; cough, spitting of blood, night sweats, and so forth. His family were around him crying, and the neighbors had collected as if they expected him to die. (Three years afterwards he called at my office in good health, on some mercantile agency on his way to the South, where he subsequently died of the fever of the country, as I understood.) He had been dining on bacon and cabbage for two or three days previous; this changed, with some ordinary remedies, he was gathering corn from the field two or three weeks after I first saw him. It is

scarcely worth while to say more, to convince any one of reflection, that it is nothing short of infatuation for a man with even slight consumptive symptoms, to attempt to treat himself, even if he does nothing but live out of doors.

As to the amount and degree of exercise to be taken daily, a sound discretion must be observed. Two main rules should govern in every case.

First. Never exercise to actual fatigue.

Second. Begin in moderation, and gradually increase in amount, day after day.

It is a good plan for the patient to turn back, when on an excursion, the moment he begins to feel a little tired. For exercise, after one feels fatigued, does more injury than the previous exercise has done good; besides, by leaving the system in a debilitated, as well, perhaps, as in a heated condition, it is extremely susceptible to cold.

To give an idea of the care requisite in some cases, I advise persons to exercise about an hour before eating, to walk a block or square,

say thirty yards, and return, and if not inconvenienced, having done this two or three times a day, then increase the distance next day some twenty yards, and thus regularly adding twenty yards daily, thrice a day, at regular times before meals, not increasing the pace materially, until they find themselves walking two or three miles at a time.

If riding on horseback, go a mile the first day and return, until ten miles out and back are ridden. Then keep at that distance, but in five minutes less time each day, until a fast trot or hard gallop is reached for the return ten miles; for the faster the gait the greater good is done, by reason of the increased exercise to the whole muscular system.

Swimming is a delightful form of exercise, especially in the early part of the day, and it is discreditable to the enterprise, the benevolence and intelligence of this and our other large cities, that artificial swimmeries are not furnished both for males and females, where adults may amuse themselves, and boys and

girls may learn an art, the ignorance of which is the occasion of so large a loss of valuable human life every year.

Where it is practicable, I have made it a favorable prescription to retire to some private place in the woods, and run some twenty yards and back, twice a day, about an hour before eating, as fast as practicable, with the mouth resolutely closed until the race is over, increasing the distance some five yards every fifth day, until the person is running a hundred yards and back thrice a day. If the weather is unpropitious, or other circumstances prevent, I often suggest running up stairs from cellar to attic, on the same principle of small beginning and gradual increase. When there is recuperative power left, it is often surprising how the capabilities of the system are increased in ways like these, when they are engaged in with a hearty and pleasurable interest.

The reason for keeping the mouth closed, is to intensify the effect of the exercise. The object of the exercise is to expand the lungs in a

natural way, to make room for a larger reception of air at each breath; the more perfectly to purify the blood and render it life-giving. The first effort, after one of these exercises, is to open the mouth and let out the pent-up air, which, by thus being pent-up, gets warmer every second, and by its increased temperature increases the expansion of each air-cell, and on getting rid of it, a full, long, deep breath is taken, which forces the air to the farthest recesses of the lungs, carrying with such inspiration its fullest, richest freight of pure, fresh air. The reader will see at once the superiority of these modes, being out of doors, over the use of dumb-bells, imaginary fisticuffs, beatings of the chest, and forcible and frequent large inspirations, which but give evidence of their unnaturalness by the light-headedness, or other uncomfortable sensations which they produce. Dumb bells and violent gymnastics I do not advise, if symptoms of decided consumption are present; for I have known strains and bleeding to have followed these sometimes, which were

never after recovered from. In the treatment of this disease, we uniformly adopt the principle, the safer plan is the better one. I would not lightly have my own life risked, nor would I do so to others.

Boat-rowing, hunting on foot, especially in a hilly region, are excellent forms of exercise. Sawing wood, if done regularly, and in moderation, has great advantages. But in all these forms, the reader is entreated to remember, that the good effect is increased in a multifold proportion, if in addition to the exercise, there is a pleasurable and profitable object ahead; one which agreeably absorbs the whole attention. This simple idea well merits the mature reflection of every invalid and every physician. To walk a mile to a certain post, and then turn round and walk back again, or any other routine exercise, with the sole object of health, is depressing and burdensome to any one, and the more so to those who have been educated, or have pursued lives of remunerating activities. These things are stated as being merely sug-

gestive, with a view of impressing the principles of action on the reader's mind; to be applied and modified in any given case, according to the soundest discretion of the intelligent practitioner. Most especially does it require a sound judgment in apportioning exercise to women at particular seasons and conditions of life, and the various states of their peculiar systems.

The kind of exercise which in our judgment is preferable to all others, is steady, continuous journeyings on horseback, every day, regardless of weathers and seasons, some fifteen miles in the forenoon and ten in the afternoon; never going out before breakfast, nor traveling later than sundown; leaving all medicines at home and eating whatever may be placed on the table; if not palatable, let it alone, or take the less of it; never asking for a particular drink, but being careful to drink something hot for breakfast, in the shape of a single cup of weak coffee, or if preferred, any kind of green, black

or herb tea, with as much or little cream or sugar, as the taste may require.

What has been stated so much at length is merely secondary. The thing of first importance, and which should most deeply impress the general mind is, not the arrest or permanent cure of actual consumption—for until men become more energetic, more systematic, and more intelligent, but few cases of decided disease can be cured, comparatively speaking. The great practical point is,

First. To ascertain the first far-off symptoms in the young.

Second. To adopt measures which in most cases would certainly ward off the disease effectually and permanently.

In a preceding page, three great, ever present, predominating, early symptoms were stated—

First. Acceleration of the pulse.

Second. Acceleration of the breathing.

Third. Diminution of strength and flesh.

As these three symptoms are sooner or later

a combination in every case of consumption, it is believed that the increase in the rapidity of the pulse for weeks and months, ought to be considered as a warning of approaching consumption; ought to be a note of terror to every paternal heart, and the physician should be promptly consulted, and urged in the most earnest manner to a thorough examination of the whole case, and if, in addition, the lungs are found to work imperfectly, all ground for hesitation should be considered as removed, and the person should be treated as a consumptive, and the treatment should be continued in the most prompt, systematic and energetic manner for months after every consumptive symptom has disappeared, so as not merely to place the system in health, but to continue until a habit of health is restored to it; then and then only, is the haven of safety reached.

To Spirometry, or breath measurement, is the most special attention directed.

The Spirometer is an instrument which measures the amount of air which the lungs are

capable of expiring, with mathematical precision, nicety and accuracy, down to the fraction of a cubic inch.

If we measure the lungs of a thousand men, under similar circumstances, with undisputed health of lungs, and find that the smallest amount given by any one is two hundred and forty cubic inches, we begin to conclude that any man who can expire two hundred and forty cubic inches of air at one effort, has healthy lungs, and the evidence is cumulative, as each known healthy pair of lungs comes up to that measure.

The testimony is strengthened, if on measuring the lungs of as many persons who are apparently consumptive, and who, on dying, are opened and found to have diseased and decaying lungs, and that in no single case was there a greater amount given than one hundred and twenty, then we begin to fix in our own minds a standard of health in connection with a measurement of two hundred and forty cubic inches, or six pints, forty cubic inches being a

pint. On the other hand, to a measurement of only one hundred and twenty, or three pints, we attach the notion of actual consumption. With these for starting points, medical men have for some years been making their observations, and the general truths arrived at are,

First. That if a pair of lungs, in perfect health, measure two hundred and forty cubic inches, it is evident, that if half the lungs are gone, they can measure but a hundred and twenty cubic inches, and so on as to any proportion above or below.

Second. If under treatment, where there is deficiency, that deficiency becomes less and less every week; then is the patient making a certain and safe improvement. On the other hand, if in all cases where the deficiency becomes greater and greater, from week to week, the symptoms become aggravated, and the patient always dies, we have double testimony as to the practical value of lung measurement. With this high advantage, the patient has ocular evidence of his actual condition; an evidence

which impresses the mind above his own sanguine nature, and above the benevolent wishes of the physician, who is apt to believe what he wants to be, even contrary to his own convictions.

An objection will instantly present itself, that some persons have more lungs than others. That is true. And it has been discovered that nature has regulated the amount of lungs for each person according to certain fixed laws.

First. The taller a man is, the more lungs he has, by a regular average of eight cubic inches more for every inch in height, beginning at a certain figure to start upon.

Second. That women have eight per cent. less lungs than men.

Third. That increased girth of chest does not give increase of lungs; that is, of two men measuring five feet seven inches in height, the girth of one being thirty inches, while that of the other is forty-four inches, the lung measure of each, in health of lungs, will be two hundred and twenty-two cubic inches.

That observation accords with science, is the familiar fact, that fat men are not more long-winded than lean men. And yet the multitude have run away with the fact that a large chest is a guarantee of increased safety of lungs.

A man applied to me, and there was a deficit of an hundred inches. I told him there was no remedy. He did not believe me, for he had walked to my office. He died in ten days. On the other hand, I have numbers of living cases where the persons believed themselves on the verge of a decline. The lungs gave their fullest measurement, and at the end of years, they are scattered over the country in good health.

Of the practical uses of Spirometry, a single case will be given of a youth, aged seventeen, thin in flesh, pain in the side, sore throat, tightness across the breast, short breath, difficult to fetch a long breath, weak back, troublesome running and sniffling of the nose, with other symptoms indicating a weakly constitution. The measurement of his lungs should have

been two hundred and twenty-five inches; they were only two hundred.

Date.		Pulse.	Weight.	Breathing.	Lung Measure.
May, 1852,	22.	72	103	16	200
June	2.	72	103	16	206
	9.	72	103½	16	216
	24.	72	107	16	238
July	19.	88	104	20	216
	23.	82	103	18	216
Aug.	7.	78	105	15	230
	24.	76	107½	16	238
Sept.	27.	72	111½	16	250
Nov. 1853,	8.	72	121½	16	252

The parents of this case visited me at different times, expressing the deepest solicitude, and exhibiting an abiding impression, that their child, upon whom so many hopes were hung, was certainly going into a decline, especially as he had grown up rapidly, and was a slim, narrow-chested youth.

The reader will see with what admirable promptness the lungs answered to the means used for their developement, in the very first

fortnight, and with that increase of action, a corresponding increase in flesh, so that in four months, and they embracing the hottest of the year, when most persons lose both flesh and strength, he had gained eight and a half pounds, while the capacity of the lungs for receiving air had increased one-fifth, that is, fifty cubic inches, and at the end of the year, when he called as a friend, was still gaining in flesh, strength and vigor, with no indication of any disease whatever.

What untold treasure would those parents have given, when their child was first brought for examination and advice, to have known that the very next year, their son would have been one of the most hearty, healthy, manly looking young men of his age in New York. And yet, there can be no doubt that he would have dwindled away, like a flower prematurely withered, had his case been neglected, in the vain hope of his "growing out of it."

The reader will notice, that on the thirteenth of July, every symptom became unfavorable.

The reason was, he had gone with his parents first to Newport, then to Saratoga, intermitting all remedial means. But on resuming them, the symptoms speedily abated, and his improvement was steady, until his full restoration, and four years later his health is in all respects good.

The only value of the Spirometer is in its accurate measurement of the capacity of the lungs to receive air. It does not tell what is the reason. It does not determine whether any deficit arises from actual decay of lung substance, whether it is because the lungs merely work feebly, or whether they are filled with the phlegm of bronchitis or a common cold. It determines infallibly how much air the lungs are consuming, and determines no more. It is for the skilful physician to decide from what cause that defect arises, and to advise accordingly.

He is not wise who decides, in any given case, whether it is consumption or not, from any one symptom, or from any half dozen. Every symptom the patient presents, with several

which he may not present, must be taken into consideration, and besides, the parentage, the health of brothers and sisters, temperament, habits of life, business occupation, in fact, the whole history of the man, should be spread out like a map, and well considered, and even then, should be decided upon, with mature deliberation.

With all the light which so common a disease has given in the course of ages, it is an acknowledged fact, that to this day, consumption may exist in a given case, and go on to a fatal termination, and yet, eminent medical men be unable to detect its presence until by actual inspection of the lungs after death—*Spirometry not having been brought into requisition.* Under such circumstances, the intelligent reader will readily appreciate its value, when contrasted with lights derived from its use in the following case, as detailed in *The British and Foreign Medico-Chirurgical Review* for July, 1856, republished by S. S. & W. Wood, 389 Broadway, New York, originally reported

by the inventor of the Spirometer, John Hutchinson, Esq., now Doctor, of London, in eighteen hundred and forty-six.

"FREEMAN, the American giant, came over to England in eighteen hundred and forty-two, to train for a prize fight.

Date.	Height.	Weight.	Lung Measure.
1842, Nov.	6 ft. 11½ in.	271 lbs.	434 cubic in.
1844, Nov.	"	243 lbs.	344 "
1845, Nov.	6 ft. 7½ in.	141 lbs.	

It will be thus seen, that in perfect health, in November, 1842, he gave the weight and lung measure as above.

Just two years later, he came to Dr. Hutchinson in ill-health, with a loss of lung measure of twenty per cent., and in weight of near ten per cent. At this time, the physicians, well skilled in auscultation, affirmed that they could not detect any organic disease, which means, they saw no evidence that there was anything like destruction of the lungs going on. One year later, Surgeon Paul, of Winchester hospital, wrote to Dr. Hutchinson, that Freeman had

just died. "His lungs were studded with tubercles; large cavities filled with yellow matter were found at the top of each lung, while both lungs were nearly healthy at their base."

In this one case, there is an exemplification of several of the most important points in this volume, summed up in few words, that,

Consumption begins with a gradual diminution of breath and flesh, which can be detected at a stage of its progress, by lung measurement, when the best auscultations fail to discover any symptom of actual consumption.

With the utmost earnestness, therefore, do we call upon every reader, to weigh well what has been said in reference to any falling away of flesh for weeks and months together; any diminution of length of breath, as indicated by actual lung measurement, or by a perceptible easiness of fatigue or unusual acceleration of breath from exercises or efforts which formerly gave rise to no appreciable inconvenience. Better a thousand times be falsely alarmed, than not to be alarmed at all, until you find

yourself stepping into the grave. And irrespective of consumptive disease, leaving it out of view altogether, as impossible of occurrence in any given case, a protracted imperfectness, want of fulness of breathing, must be inevitably followed by some sickness or other, and a premature death from this, there is no escaping; proving as it does in the language of an eminent medical writer, that "The study of lung measurement in health and disease, is as beneficial as that of the mechanism of respiration to the science and progress of medicine," and that medical men "have been forced to unite their testimony, in pointing out how a knowledge of lung measurement lends invaluable aid in the indication of a disease, most subtle in its commencement and most fatal in its termination."

As early as sixteen hundred and seventy-nine, near two centuries ago, BORELLI instituted experimental inquiries as to the quantity of air which the lungs could contain, and from that time until the present, urged by a convic-

tion of its high importance, various attempts have been made and instruments contrived by such men as Goodwin, Davy, Thompson, Kite, Pepys, Herbert, Seguin, and many others, to accomplish a mathematical measurement of lung ability of respiration, and not until eighteen hundred and forty two, has the method been perfected.

In consumption, are often advised. Old sailors know what the "land cough" is. As soon as the ship comes within forty or fifty miles of the land, the cough returns. A voyage of many months, and even years, seldom coming within a hundred miles of land, the person doing ship duty, may have a valuable remedial effect in cases of forming consumption; but a much less time, in horseback journeys among the mountains of the middle states of the Union, would have a many fold happier effect in any given case.

A single glance at passenger life aboard ship, as to its details, is sufficient to show how

unlikely a consumptive is to be benefited by it.

The author has travelled much by sea, in sailing vessels and steamships, has been out of sight of land for months at a time, but he has failed to find a single breath of pure air in any ship's cabin he ever entered.

Very few persons are on deck before sun up, and very few invalids are there after sun down. Very few indeed, manage to get out of the cabin until after breakfast, or 8 o'clock, and retiring for supper at six, there are just ten hours left for breathing the pure sea air on deck, but out of that ten, two must be deducted for taking dinner and lunch and a nap. But every fair day, in a well regulated ship, the decks are washed off in the morning and are quite wet even as late as nine o'clock; this leaves but seven hours. But somehow or other, there is always something to be done on deck in fine weather, and the space for promenade is confined to the quarter deck, which being occupied by other passengers, sitting, lounging, standing in groups, is to an invalid

needing exercise, about equal to no exercise at all. Thus, even in fair weather at sea, an invalid has seven hours out of the twenty-four to breath the pure air of heaven, with comparatively limited opportunities of exercise, while fourteen hours—just double the time—must be spent in breathing a bilge water atmosphere. Then again, when it is remembered how many days are not "fair" at sea, even in summer time; foggy days, rainy days, days in which cold, raw, damp winds prevail, when confinement to the cabin for the whole twenty-four hours is a necessity to an invalid, it must strike the reader that the advantages of *pure* air at sea, are a myth, and bear no appreciable proportion to horseback activities, as far as a consumptive person is concerned. To get at the pure truth of any thing, we must look at minute specifications, and judge and act accordingly.

SEA SHORE.

The common observation of persons living on the coast, is so conclusive of the injurious

effect of such localities in all affections of the lungs, it is not necessary to offer an argument, except merely to state the reason.

All consumptives are easily chilled, from want of vitality, of physical vigor; there is always more or less dampness in sea-coast situations, as well as of wind. Dampness cools the surface rapidly, and so will a slight draft of air, and when both are combined, the chilling effect is prompt and most pernicious. This is one of the reasons why consumptives have a good appetite usually; the body needs warmth, that warmth is derived from the food, and the appetite is in proportion to the demand for heat; but since the digestion is not vigorous, the fat of the system is used for fuel, and this supply being drawn upon day by day, the patient wastes away to skin and bone; hence, heat being more needed on the sea-shore, the decline in flesh is more rapid; hence, also, consumptives should select inland localities, where many miles of woodland break the force of the winds and absorb their moisture.

Lake shore and prairie localities are undesirable, as cold damp winds usually prevail there.

The locality beyond all others best suited for the restoration of consumptives, should possess a cool, dry, still atmosphere.

The coldest latitudes are the dryest, and often less subject to winds. Hence it is, that in Wisconsin, the roads are often dusty in winter time.

IS CONSUMPTION COMMUNICATED?

It is not "catching," in the general sense of that word. Quite a number of those who have applied to the Author for treatment have had a wife or husband die of consumption. A person in robust health need not fear sleeping in the same room. At the same time, an individual in feeble health would be injured by it, and if inclined to consumption would have that disease more speedily developed; not because of its "catching" nature, not because there is any substance emanating from a consumptive in the nature of seeds of the disease,

but because the air has been rendered impure; any other atmosphere equally impure from any other cause, would promote or precipitate consumption just as well. Let the reader keep in mind that impure air of any kind and from whatever cause, is not only promotive of consumption but originates it, whether that air be rendered impure by natural causes or by artificial means, whether by the odors of a slop-tub or the fumes of medicinal substances. Nothing can add to the virtues of pure air, in cleansing and perfecting the blood; otherwise, an Allwise Father would have made it differently; nor can anything else supply its place, because, whatever Omniscience has contrived, that is the best of its kind.

EXPECTORATION.

No means known, can determine any thing positive, from the expectoration, as to whether consumption exists in any given case or not, until a period of the disease so far advanced that other symptoms supply all the proofs needed. Much has been written on this sub-

ject, but scientific physicians of all countries have come to the conclusion, that the expectoration affords no reliable or valuable test, until the later stage of the disease.

CHEESY MATTER.

In looking down the throats of some persons, whitish lumps are discovered about the *Tonsils* and adjacent parts; these lumps are of various sizes, from a pin-head to a filbert. The ignorant conclude that the *Tonsils* are ulcerated, and apply to the physician in a state of alarm. Other persons are constantly spitting up similar particles, either cheesy or chalky. The soft ones have sometimes a very disagreeable odor; sometime the harder particles from a particular position excite distressing cough lasting for weeks, and at others very inconvenient breathing, in either case the symptoms abate at the moment of their dislodgment from any of the branches or bifurcations of the windpipe. The author had a case presenting violent cough, short breathing, falling off in flesh, with other indications of con-

sumption. In a short time a chalky lump was expectorated, and the man got perfectly well.

A lady aged twenty-seven, had a habitual cough, hectic, flushed cheek, pains in the chest, difficult breathing, debility and yellow expectoration. She died, and not a solitary tubercle was found in the lungs. All the symptoms arose primarily from two chalky concretions, pea-sized, and joined together in the centre of the lower portion of the left lung, the right lung being perfectly sound.

The presence of these substances in the throat, or as expectorated in small rice-like bodies, whether chalky or cheesy in hardness, whether offensive or inodorous, indicates a depraved condition of the blood. Tubercles may or may not be present. In cases where they are a form of tubercle, the author considers it the easiest way of getting rid of them. In whatever form they exist, the best plan is to let them alone, they do no special harm; their simple presence, is no sign of consumption. But build up the general health.

NIGHT SWEATS,

Merely indicate debility; they are of themselves no possible proof of the presence of consumptive disease, as all experienced physicians know; when accompanied with flushed cheek and fever, what is called hectic, they indicate that yellow matter is in the body somewhere, and that it is being re-absorbed into the circulation. The only remedy where it exists, is to get rid of it. Taking quinine, elixir vitriol, and other constringing remedies, only increases the cough, and shuts down the hatchway while the hold is on fire; it is confining matters which nature is endeavoring to push out of the system. The true policy is to help nature, by setting the liver to work, and causing copious evacuation; by keeping the skin well rubbed with tonic appliances, so as to relieve it from its flabby condition, and above all, to breathe the greatest amount of pure air, so that every breath that leaves the body may go out laden with these impurities, most especially when this yellow matter is in the lungs. At

the same time, let the patient eat heartily, so as to give strength to the system to throw off this offending material.

TONICS.

The great cry is for something to create an appetite; but how wise, let the thinking reader judge.

Consumptive people are weak all over; every muscle and gland in the system has its share of the debility. Nature ordinarily regulates the appetite to the needs of the system, and its capabilities. But in consumption, the need for food is greater than the power of digestion, because there is an extra demand for both strength and warmth. Here then, science, for once, must devise a proper adjustment—must interfere. But how? Not by digitalis and tartar-water, or other nauseants, to take away the appetite; great nature, alive to such an error, takes away the susceptibility to nausea, and what makes nine out of ten "deathly sick"—a storm at sea—fails of its usual effect as to the consumptive, in many instances.

It would be equally unwise to assist nature in giving or increasing the appetite, because, already, the stomach has more to do, than in its participant debility, it is able to perform. The true course to be pursued then, is, not to take away the appetite nor to increase it, but to direct all the attention towards giving to the stomach greater powers of assimilation, by administering suitable remedies *after* eating. The physician is not to give *tonics* to increase the feeling of hunger, but to add to the power of digestion. Otherwise, the consumptive will eat more than he can digest, and thereby, in many instances, aggravates the cough, by the acidity of an over meal, which irritates the throat, causes "tickling" to be felt there, and a cough, lasting for hours, is suddenly terminated by vomiting up all that had been eaten, which, by the sending forth of sour fumes, shows plainly enough the cause of mischief. The author has known persons to cough half a night from a hearty supper. Hence his almost universal advice, to take nothing for supper,

absolutely nothing, but a single cup of weak tea, or other warm, mild drink, and some cold bread and butter. At other times, the acidity passes off in the shape of a wasting diarrhœa, sometimes cutting life short off, in a few hours, unless competent medical advice is promptly sought.

A consumptive person ought never to have more than two actions of the bowels in twenty-four hours, nor less than one, but it is far better to have less than one, than more than two.

The scientific practitioner will know at once the whole class of tonics. It is practically useful to state here some things that are largely advised, but are injurious, and not beneficial, to wit: the whole class of beers, ales and porters; they give no *solid* flesh, impart no real strength; they do sometimes give a puffy, flabby condition of muscle, but it is not real fat. They make a deceitful show up to a certain point; after that, they cease to have any effect, give not even of their temporary stimu-

lus, leaving the patient the more rapidly to fail and sink into the grave.

The same objections apply to all the wines, while there are occasional effects from their employment in special cases which make them more decidedly injurious.

In cases where tonics are indicated in the clear judgment of the physician, they should be in the form of the unmistakably pure brandies and whiskies, saturated with the bitter principle of those roots which educated physicians usually employ, always to be taken *after* meals, say within half an hour after eating, with an alkali or not, as the state of the system may demand. Still, the author believes that the pure Cayenne Pepper, as found at the best city drug-stores, if largely used at meals, would have all the best effects of the brandies, without the exciting or injurious and transient influences of the alcohol. The Cayenne gives power to the stomach, without affecting the brain or the pulse. It is hoped that medical men will mature this suggestion.

The author does not believe that alcohol or fat, whether in the shape of pure brandy or genuine cod-liver oil, has ever had any direct curative agency in any case of consumption ever treated by them; both remedies have their champions, and they are equally self-deceived, from not taking an enlarged view of the subject. That both of them do good in consumption, is not denied; but it is not a radical good, and is never permanent. The only benefit derived from them is time; they protract the burning up of the system, by affording fuel to the ceaseless fire which wastes the consumptive away; and as long as there is oil or alcohol to feed the flame, the body itself remains, with limitations, unconsumed. Oil and alcohol are useful in consumption for the very same reason, to wit: they are largely made of carbon. Thus it is that there are cases, in the experience of all, where persons *improved* wonderfully for a season, but after swilling down "whole tubs" of whiskey and gallons of cod-liver oil, they have died at last. A further evidence of

the nature of these remedies, is the frequent confession, "*I gain no strength*" under their employment. But these remedies do often "*give time*," and if that time is properly improved by out-door activities, a good result will be gained. But when it is remembered that out-door activities have been efficient of themselves, without the aid of oil or alcohol, there is abundant reason to question the efficacy of either; and that after all, the great curative agent in any case of consumption removed, and replaced by permanent health, has been *moderate exercise out of doors*, IN ALL WEATHERS, *for a period of many weeks and months.*

It is important to note that the great and radical difference between these two classes of remedial means, is this:

Out-door activities, by improving the digestion, eliminates from the food both warmth and nutrition, while oil and alcohol give warmth only, affording no nourishment, imparting no strength, and consequently effecting

no radical cure; bringing about no fundamental change in the system.

But if *moderate and persistent exercise in the open air* has accomplished so much in the cure of consumption, how is it, that it has not been known before, and why is it not more frequently resorted to? It has been known among educated physicians for centuries, but not one in a thousand has the time and money necessary to carry out the remedies, and of those who have both, not one in a million has that firmness of will and energy of character required to a thorough observance of the means of cure.

A case is given, where a lady made a beginning with a short ride, supported by pillows in a carriage. In two months she was able to drive herself, which she did *every day regardless of the weather*. In another month she began to ride on horseback. In six months she was nearly free from the general symptoms of the disease, but intermitting the exercise, *before she was fully restored*, she relapsed and

died six months afterwards. This single case illustrates the perversity of multitudes and their want of perseverance. In the very face of such a remarkable improvement from the use of means neither disagreeable nor expensive, this lady tired and died.

Another case is reported of a wood-cutter in Maine, who could scarcely lift his axe, but he was compelled to work for a subsistence, and at length became strong enough to do full labor. Yet with the every-day admission of feeling better from being out of doors, patients will cling to the house, and loll about on sofas, and doze away their existence in warm rooms and sweltering feather beds, and thus become the passive instruments of their own execution.

Sydenham, called the father of physic, born more than two hundred years ago, wrote of the out-door activities as the "all in all" remedy for consumption, asserting that if these were carried out fully, a man could afford to eat and drink whatever he wanted.

M. Piorry, one of the most experienced phy-

sicians in France, in lung diseases, uses the following explicit language: "If I was called upon to choose between health precautions and the whole category of remedies, (besides Iodine,) I should give preference to good regimen, a nutritive and reparative diet. Patients coming from the north, in spite of all that has been said to the contrary, recover no faster and no better, than elsewhere."

It is instructive to remember that only those who are in the forming stages of consumption derive any substantial benefit from going to the south, and that benefit is the result of the milder weather enabling them to spend the greater portion of their time out of doors.

THE TONSILS.

It has become fashionable of late years to cut out the tonsils, and to clip off the palate, whenever a man complains of a cough or a sore throat.

Dr. Physic once cured a man who was apparently in the last stages of consumption, and who had tried in vain the most eminent prac-

titioners in Europe and America, by clipping off the palate. It is the mature conviction of the author, that not one case in ten thousand, is materially or radically benefited by the bloody practice. It is very much like the vaunted remedy of passing a knitting needle through the tongue horizontally for the instantaneous cure of stammering, but as soon as the parts heal, the impediment returns. For a few days after a palate is clipped off, the symptoms abate, but return on healing.

Cases are recorded where persons have nearly bled to death from excision of the tonsils. The operation is not a painful one, and the risk is rare, but it should not be incurred, without the clearest indications of its value.

The author believes that in many cases, the removal of the tonsils is an indirect, but the actual cause of death; in this way, colds often settle in the tonsils; that is, spend all their force there, and being sparsely supplied with nerves, they have not much feeling, while being attached to soft parts, they swell readily,

and thus become a temporary reservoir for the inflammatory or congested blood. Thus the tonsils bear the brunt of every cold that is taken. But suppose the tonsils are removed, every cold passes lower down and settles on the delicate throat organs, or on the lungs themselves, which, if tubercated, amounts to nothing short of adding fuel to the flame of consumption. Thus it is, that when we look into a man's throat who has consumptive symptoms, and find it looks like a great cavern, we conclude he is going to die, because there are no tonsils there to act as a derivative from the lungs, while remedial means are employed in another direction. The author commends this suggestion to every young physician, for nature does nothing in vain, and the tonsils must have an important purpose, although men have not yet found out what that purpose is.

DRAINS,

Of whatever character, especially about the age of twenty, sap the health of multitudes

but of none more than of those who yield to youthful indulgences, indicated by the pale face, the hollow cheek, the nervous habit, the depressed spirit, the love of solitude, and that general want of vitality, which often leaves the feet cold, the fingers icy, while the whole body is so sensitive, that a slight breath of air, or an emotion of the mind, sends a tear to the eye or a chill through the whole frame.

As such medicines as control these things, either act temporarily or take away the powers of the individual permanently, those who are thus afflicted should consult their own physician, for in him only are they safe from pecuniary impositions; and by such natural agencies as will build up the general health, he will indicate the only road to restoration, and thus save from an early consumption.

THEOLOGICAL STUDENTS

Of the present day, conduct themselves in such a manner at the seminaries, as sends them into the ministry in a physical condition which incapacitates them both in body and

mind for the arduous and responsible duties of ministerial life. While every means are used to educate their minds to the highest capabilities of logic and of science, no efforts are made to give them high bodily health; the consequence is, that not a few die within a year or two after leaving the seminary, while many desert their calling on account of ill health. This is a monstrous oversight—an error in church economies, which is amazing; thousands of dollars and ten years of time are spent in preparing a young man for the ministry, and just as the course is completed, he lays himself down and dies. With a view of reaching such, and also of making these pages practically useful to a large circle of readers, the author appends two circulars which he prepared some years ago, for the use of those who applied to him for medical advice, not only as a present guide, but as a permanent counsellor, after they were no longer under his special care:

AIR AND EXERCISE.

No remedy known to men, has such a pow-

erful and permanent influence in maintaining or regaining health, as the judicious employment of cheerful, exertive exercise in the open air; and if properly attended to in a timely manner, it will cure a large majority of all curable diseases, and will sometimes succeed, when medicines have lost their power.

If you have actual consumption, or are merely threatened with it; or if, from some of your relatives having died with it, you have unpleasant apprehensions of its lurking in your own body; or whether from a diseased liver or disordered stomach, or a dyspeptic condition of the system, the foundations of the dreadful disease are being laid in your own person; or whether by exposure, by over bodily exertion or mental labor, or wasting cares for the present, or anxieties for the future, or by hugging sharp-pointed memories of the past, or by intemperate living, in eating or drinking, or by unwise habits or practices in life, you have originated in your own person, the ordinary precursors of consumption,

such as hacking cough, pains in the breast, chilliness, wasting of flesh and strength, shortness of breath on exercise—under all these circumstances, a proper attention to air and exercise are indispensable aids—are among the principal, essential means of cure, and are never to be dispensed with; confinement to the regulated temperature of a room in any latitude, is certain death, if persevered in; and if from any cause, this air and exercise are not practicable to you, except to a limited extent, it is your misfortune; your not being able to employ them, does not make them the less necessary, *and they have no substitutes.*

When the body is diseased, it is because it is full of diseased, decaying, dead, and useless particles; the object of exercise, as well as medicine, is to throw off these particles; medicine does it more quickly, but exercise more safely and certainly, *if there is time* to wait for its effects. Every motion of the body, every bend of the arm, every crook of the finger, every feeling, every breath, every thought, is

at the expense, the consumption, the throwing off, of a greater or less proportion of the material body; all muscular motion implies friction, and where there is friction there must be loss. In proportion, then, as you exercise, you get rid of the old, useless and diseased particles of the body, and by eating substantial, plain, nourishing food, you supply new, healthful, life-giving particles in their stead; therefore, every step you take, tends to your restoration, provided that step be not taken in weariness or fatigue; for then, it prepares the way for a greater destruction of living particles, rather than a removal of the old. You will never fail to find, that whenever you *overdo yourself*, in the way of exercise, you will feel the worse after it. The exercise must be adapted to the strength, and the rule is imperative under all circumstances. STOP SHORT OF FATIGUE. This applies to mental as well as to bodily operations. But if you say, as many others have said, and died, "I can't help it," then you must take the consequences and responsibility. If you do

not use the means of health, you cannot be cured. If you really and truly *cannot* use them, that inability does not alter the necessity of their observance, nor the effect of their neglect.

Have, if possible, an hour's active, cheerful, willing, out-door exercises thrice a day; this is many times better than three hours' continuous exercise. If you walk, or leave the house, before breakfast, eat first a cracker or crust of bread. Avoid, during warm weather, in the south and west, and in level or damp situations, the out-door air, including the hour about sunrise and sunset. There is no danger usually, even to invalids, in exercising in the night air, if it be *sufficiently vigorous to keep off a feeling of chilliness.* This should be the rule in all forms of out-door exercise, and is an infallible preventive, as far as my experience extends, against taking cold in any and all weathers, provided it be not continued to over exhaustion or decided fatigue. Such exercise never can give a cold, whether in rain, or sleet or

snow, unless there be some great peculiarity in the constitution. It is the conduct *after* exercise, which gives the cold; it is the getting cool too quick, by standing or sitting still in a draft of air or open window or cold room. The only precaution needed is, to end the exercise in a room or temperature, uncomfortably warm when first entered, and there remain until rested, and no moisture is observed on the surface.

If working or walking cause actual fatigue, then horseback exercise is the next best for both sexes, but if not able, then ride in a close carriage, especially in cold weather, or when there is a damp raw wind blowing. You may in the bitterest, coldest weather, secure for yourself the most favorable of all circumstances for recovery—that is, a cool, dry, still atmosphere, by riding several hours a day in a close carriage, well and warmly clad, with your feet on bottles of hot water. The atmosphere of the carriage will not become impure but to a slight extent, as the cold fresh air is

constantly coming in at every crevice at the sides and below, while the warm, used air, rises to the top, and is expelled by the more powerful currents from without.

It is a laborious business to spend hours every day in exercising, for the mere sake of the exercise; therefore, if possible, devise means of employment, which will combine utility with your exercise. The reader's ingenuity may devise methods of accomplishing this, adapted to his condition, and the circumstances by which he is surrounded. Some trim, or bud or graft fruit-trees, work in a garden, cultivate the vine, or flowers, or plough in fields, free of stumps and stones, thus requiring no great effort, yet a steady one, which can be left off at any moment, and followed more or less energetically, so as to produce a very moderate degree of perspiration on the forehead, without fatigue; others saw wood, visit the poor and unfortunate, drive cattle, collect accounts, obtain subscriptions, sell books, distribute tracts, ride on agencies. The great

object is, useful, agreeable, absorbing, profitable employment, in the open air, for several hours every day, rain or shine, hot or cold; and whoever has the determination and energy sufficient to accomplish this, will seldom fail to delight himself and his friends with speedy, permanent and most encouraging results; and be assured, that these alone are the persons who can rationally expect to succeed in effectually and permanently warding off the disease when seriously threatened, or in arresting its progress permanently.

While exercise is important in working off the old, useless, decayed, dead particles from the system, it is equally advantageous in keeping the body warm, by driving the blood to the skin, and keeping it soft and moist; for persons who have a dry, harsh, cold skin, are never well. But pure air is as important as exercise, because the food we eat never becomes blood, until it meets in the lungs, the air we breathe; if then, we do not take in enough air, or what we do take in is im-

pure, the blood will be imperfect and impure, and in proportion, unfit to nourish, strengthen and vivify the body. And as in threatened consumption, the lungs work more or less imperfectly, and consume less air than the system requires, so much the more need that the air which is consumed, should be of the purest kind possible. Therefore, every hour spent out of doors in the pure air, *fatigue and chilliness being absent*, adds that much to the certainty of your recovery. Thus you see, that while exercise works the old diseased particles from your body, pure air puts the finishing stroke of perfection to the new particles which are to take their place, and the whole body, in proportion, becomes new and fresh and healthful and young. And whatever advice is given you in other printed or written papers, it is designed as an *aid* to bring about these things in a shorter time and easier way. This *aid* is needed in most cases, because, unfortunately, the disease has been neglected or mistreated so long, that nature has lost the power, to a great

extent, of helping herself, and medicine must be taken, or the patient perish.

There are two dangers in taking exercise, that of overdoing it, and of getting cool too quick afterwards. Therefore observe the following rules:

If you ride and walk on any one occasion, do the riding first, then the walk will warm you up; but riding after a walk, you get chilled before you know it.

At the end of a ride or walk, do not, for a single moment, sit or stand still anywhere out of doors, nor on damp places, nor on stone or iron seats. Never end a walk or ride, in a new building, or in a room which has been closed for some days, or has no fire in it if in winter. Walk quickly, cheerfully, with the chin on or above a horizontal line. Make no other effort to walk straight, except thus to elevate your chin. In other words, hold up your head. Breathe habitually with your mouth closed, in damp or cold weather; and in going into the out-door air, close it before

you leave the house, and keep it closed, until you get warm, especially after speaking or singing.

Embrace every opportunity of running up a pair of stairs, or up a hill, with the lips closed; a dozen times a day if possible. A rapid run of fifty or a hundred yards and back, three or four times a day, with the mouth closed, will be of inestimable advantage. The reasons you can study out at your leisure.

But simple as these things are, never attempt them, without the special advice of an experienced physician, for in certain forms of heart affections, as every practitioner well knows, as also in one or two other ailments, such exercises would, in half an hour, cause certain death.

It is of high importance to the healthy, who wish to keep so, and to the sick, who are in search of so great a happiness as that of being sound and well again, to breathe habitually with the lips closed, in cold weather, in going from a warmer to a cooler, or from a cooler to

a warmer atmosphere: the injury is perhaps equally great either way. Close the mouth *before leaving* a concert room, or church, or other warm apartment, and keep it resolutely closed, until you have walked far and fast enough to have hastened the circulation of the blood, and made it more full, as well as active.

In going into a warm apartment, from the cold out-door air, the same direction is of not less importance; nor should you go at once to the fire; a delay of two or three minutes is sufficient in this case. The object, in both cases, is the same, to prevent a sudden transition from heat to cold, or the contrary. Such sudden transitions give pain to the solid tooth, or discomfort, when made to a single square inch of the skin; and when it is remembered that the air-passages are among the most delicate structures of the body, and that the lungs, if spread out on a wall, would cover a surface ten times larger than the whole skin would do, the importance of the subject must strongly impress every reflecting mind.

With the above precaution, you need not be afraid of out-door air, night or day, as *long as you are in motion sufficient to keep off a feeling of chilliness;* hence, in cold weather, exercise on foot is infinitely preferable to riding, even on horseback. While walking in moderately cold weather, the hands should be covered with a thin pair of gloves, such as silk or thread, and woolen ones in mid-winter. If you have to ride in winter, endeavor to have clothing enough to prevent a *feeling of chilliness*, but be careful to wear a *loose fitting* boot or shoe; never put on a new pair, winter or summer, when starting on a journey, or coming to the city. In very cold or windy weather, ride in a close carriage.

RULES FOR HEALTH.

Eat three times a day, and at the same hours. At the first meal, and when you dine, take the kind of food which best suits your taste, and which does not make you feel dull, or sick, or full; which leaves no weight; nor should it cause any spot to burn, or feel sore, or raw, from the throat down.

For the third meal of the day, take cold wheat, or brown bread, with but one cup of green, black, or herb tea, to which you may add cream or milk; you may make it sweet if you wish. Or, in the place of these, you may boil some rice and eat it.

Do not fry your food at all, nor eat at one meal more than four kinds of food, one of which should be bread one or two days old. Eat corn bread while it is hot and fresh. If you toast your bread, do not make it black or brown; it should be of a pale straw tint.

From Spring to Fall take meat but once a day, and this should be salt ham two or three times a week.

From Fall to Spring, take meat twice a day if you wish it. Use fresh meat, and roast or broil it, but do not fry or boil it. Take at each meal one cup of warm drink. Do not at one meal, take more than one cup or half a glass; nor when you rise from your meal, drink at all for an hour or more. At all times, when there is much thirst, or the tongue or throat is dry,

it is best to eat as much ice as you want; you may eat it all the time; but do not take cold drinks, or if you do, do not take more than half a wine-glass, in the course of an hour.

Cut up all your food as small as peas, and chew it well too. Do not eat fast, take your time. Spend at least half an hour at each meal. If it is hard for you not to eat too much, have your meals brought to your room, and while you take them, let no one be with you. You need one third less food from Spring to Fall, than from Fall to Spring: note this well.

DRUGS.

We use drugs, now and then, to take from us that, which if it does not pass off, will cause harm. But if we can make our food act thus, we gain a great point. This can be done for the most part, if we take the care and pains we ought to do. If then, our food can be made to do its own work, and made to do that of drugs, it gives us its own strength and saves us from that weak state which all drugs fail not to cause.

It is well known, that drugs do, nine times out

of ten, make us feel sick or weak, if not both. If then you are bound, use such food as will make you less so. If you are loose, use what will bind you. There are but few who will fail to do this, if they will take some care to note these points. If the food does not act from day to day, then you must use drugs of some kind, but first try the food, and try it well. If bound too much, use figs, hot corn bread, rye bread, brown bread, or fresh fruits; but these last you should eat soon in the day, they then act best. When bound, do not take meat or milk.

If loose, then use rice thus:—parch half a pint till it is brown, then boil it, and eat no food but this, for a day or two, and take no drink; but you may eat as much ice as you want, if there is much thirst. When loose, by all means be still, lie down on a bed and stay there, till you are well. It must be a bad case which rice does not cure in a day or two, if you are still all the time. If you do not like rice, boil some milk, and while it boils stir in

some dry flour, till it is as thick as mush, then eat it, and in four hours eat some more, and so on—eat no food till you are well but this mush, made out of flour and milk. Do not eat much at a time. These things will, at times, cure you, when drugs fail.

Men are more apt to be bound too much, than to be loose; then mark what kinds of food tend to make you loose, and use them, when you are bound. The best way is, as soon as the time for a move has gone by for three or four hours, cease at once to use meats of all kinds, and use what tends to make you loose.

Keep these things in view, in all time to come, sick or well. When food fails to keep you in such a state as to pass off the waste day by day, then I will point out such means as may best meet the case.

SLEEP.

No one can be well long, who does not have sound sleep. All do not need to sleep for the same length of time: the old need less than the young; those who work, more than those who

do not; a man does not need as much as she who was made "a helpmeet for him." To give rest and strength, sleep must be sound, and it should be for six or eight hours at a time; if in short naps of half an hour or so, it does not do much good, as it does not make one feel fresh and strong, and full of life.

As sleep, then, is of such use to all, you should do what you can to have sound sleep, for some hours at a time; for those who are not well, must have it. Do not sleep in the day time. Go to bed at the same hour each day, at least by ten, and when you wake, rise at once, and sleep no more that day; and soon, it may be, in a week or two, you may thus go to sleep as soon as you lie down, and sleep sound, till the dawn of day; or at least, you will wake up as soon as you have had as much sleep as you need; such is the wise law which rules your frame.

The length of time which we pass in sleep, is not the same for all; some need six, a few, nine hours sleep. One may doze from ten to

twelve hours a day, but it is not the true sleep of health.

Sleep in a large, light, clean, dry room, at least a score of feet from the ground, if you can get such an one; it should not be less than twelve feet square and eight or ten feet in height. The air is more pure as you go up. Have where you sleep no more clothes, stands, chairs, books, and the like, than there is need for.

Have no wet or damp place or clothes in the room. Let it be so that the first rays of the sun shall stream in and make it light and pure. Do not, at night, close the doors, or grate, or place for fire. Raise the sash an inch or two, and if you can, let it down as much or more, at the top, so as to have a draft of fresh air pass through the room all night. This should be the case all the year round, though ice may form in the room half an inch thick. If you are quite ill, you may have some fire. In the cold months, have a fire to get up and dress by.

Leave the room in which you have slept, as soon as you can, to get clear of the foul air; but when you leave it, shake up the bed, have the clothes spread on the backs of the chairs, to air them. Raise each sash, do not shut the door, and let the sun shine in for two or three hours each day, but if the day is damp and raw, close the doors, put down the sash, and make a brisk fire to burn for an hour or more, when the sun sets: then, the room in which you sleep, will be kept fresh, and dry, and clean; it will be full of pure, sweet air; thus you will do much to cause good sound sleep, which in turn will aid more than you think for, to make you fresh, and strong, and well.

Wear none of the clothes at night, which you have worn in the day, but hang each piece on a chair, to air all night, to be fresh and clean to put on next day. Sleep in a gown at night, not made of wool, but of that which sheets or shirts are made of. You will not take cold by this change, though you may have slept in wool for a great while, if you

take pains to rub the whole skin from top to toe with a coarse wet, cold, cloth, when you go to bed.

FEET.

No one can sleep well with cold feet, and no one can have good health long, whose feet are cold all the time. It is worth, then, all the pains you can take, to keep your feet warm and dry, day and night. By all means, let the shoe be loose. If you ride in a coach, or sit still, a pair of socks made of wool, will warm your feet, when a tight pair of boots would let them freeze stiff. The length of the shoe should be one tenth more than the length of the foot, at least.

When you first get up, put both feet at once, in a cold bath, an inch or two or three in depth, for as long as you can count six score and ten, rub them well with the hand, all the time they are in the bath, then rub dry with a coarse cloth, and hold them to the fire, if you have one, and if not, rub them till the skin is

red or warm as can be made. By no means should the bare feet touch the bare floor.

When you go to bed, warm the feet well by the fire for some time, and rub them all the while, till not a damp spot is to be found from heel to toe. If your feet get cold in the night, have a hot block of wood put to each foot at bed time. A brick may set the bed on fire. Do not try to warm or dry the feet with the shoes or socks on. When you come in from a walk, if the feet are at all damp from sweat, or rain, or mud, pull all off at once, dry them by the fire, and put on fresh, clean, dry socks, and shoes.

Do not, when you come in from a walk, put your feet in a cold pair of shoes. I have known some who were made quite ill for months, from such a cause. Should your feet or clothes get wet from sweat or rain, change them *as soon as you cease to move*; if you sit or stand still for a short time, you will be quite sure to take a bad cold; but first rub the skin with a

coarse dry cloth, fast and hard, as far as you can reach, with your mouth shut.

CLOTH BATH.

In the same way, rub with a coarse wet cloth the whole skin, when you get up, for near the tenth part of an hour; throw out the breast and rub it well. Do the same when you go to bed, with the dry hand, mouth shut, so as to keep the air in the lungs, and swell them out.

The aches, ails, and ills of all, are not the same, but the rules which I have laid down in this sheet, are such as all can keep; and they will not fail, in one case, to do great good; they would keep in good health half of all who live; and would bring good health back to half who are sick.

SPITTING BLOOD,

Is not causative, but curative of consumption. While two thirds of all who die of that disease have this symptom, the other third do not, showing that it is not necessary to that malady. Consumptive persons, who spit

blood, live longer, by months and years, than they would have done, had not this symptom been present; because, every occurrence of it unloads the blood-vessels; while their being overloaded, is the direct cause of tubercle. Spitting of blood, then, directly diminishes the formation of tubercles; and the fewer tubercles, the greater is the hope of cure, and the longer will the person live.

At the same time, there is a popular horror of spitting blood, or as it is sometimes expressed, "bursting a blood-vessel." The idea of imminent death is attached to such an occurrence, and it does sometimes take place. But the fact is, that not half a dozen persons in a million, who die of consumption, bleed to death. The author has never known such a case. Death by the rupture of a blood vessel, is nearly always the result of some disease of the heart, or physical violence.

But while spitting blood has no agency in causing consumption, it is, for all that, a strong presumptive evidence of the actual exist-

ence of tubercular disease, in its early stages. So that when a person spits blood in any quantity, from a quarter of a tea-spoonful, upwards, not connected with the periods of women, nor with physical violence, it is quite certain, that the lungs are tuberculated, and the patient should consider himself as having consumption the very moment it is first observed, and should, without a single hour's delay, adopt vigorous, decisive and persevering measures for restoration. In three cases out of four, a permanent cure may be effected. But the suggestion that it may be from the throat, or gums, or from the nose, and falling down behind, comes out of the mouth, is indeed comforting to the patient, especially if the physician makes that suggestion or countenances the supposition; but by quieting fears which are but too well founded, valuable time is lost, and multitudes perish, who else might have been saved. For certain it is that many have spit blood in youth, and died of old age, showing that it is not of itself, by any means, a fatal

symptom. If inquiry be made here—close, specific inquiry—it will be found that such a result followed some decided change in life, either as to locality, climate, or occupation, involving one of two things, either much larger out-door activities, or more energetic in-door employment. Let spitting of blood, then, be set down as a demonstration, that the seeds of consumption are present, except when it amounts to a mere spec or drop, or a streak or two, or from physical violence, or female periodicity. And while its repetition, in the course of proper treatment, should be regarded as retardative of the progress of the disease, it should be looked upon as an evidence that the seeds of consumption are present, and that more and more strenuous efforts should be made and kept up, for many months after the symptom has entirely disappeared.

Spitting blood indicates that consumption has advanced beyond its first stages, and close inquiry will elicit the fact, that some falling off, or change of breathing or frequency of

pulse, had preceded this symptom. Some persons never noticed any cough until at, or soon after the first blood appeared; generally hæmorrhage modifies the cough. Whenever it appears, send for a physician; then, lie down, envelope the feet in a bag of mush or hot salt, lay a flat piece of ice on each breast, just under each collar bone, and quietly wait until the doctor comes. If the patient is alarmed and must be doing something, let him eat common table salt as freely as he desires. The author himself, would let it bleed away, until it stopped, and next day, would travel on horseback, a mile or two or three; increasing a mile or two, daily, until fully restored, having also some other and more agreeable object in view. Spitting blood then, is an evidence that tubercles are in the lungs, to a hurtful extent, the exceptions previously named being understood.

It is a symptom which should not be suddenly controlled; and if it exists but to a moderate extent, merely tinging the saliva, or not

amounting to a tea-spoonful or two in twenty-four hours, then disappearing for days or weeks, to be repeated; or even if it amount to a tea-spoonful or two at a time, and then abates of itself, under such circumstances it should not be interfered with, for it directly retards tubercular deposite, abates the cough, and by relieving internal clogging up, causes, in many instances, a feeling of general relief. The author believes, that no internal remedy has any direct and safe control over this symptom, unless it be common salt, a level teaspoonful dissolved in three or four teaspoonfuls of water and drank quickly, and then two or three or more level teaspoonfuls, to be eaten in the course of the day, as freely as desired. Perhaps the benefit derived from this remedy, is on the principle of revulsion, as salt excites thirst, thereby indicating an absorption of the fluids of the system, and thus diminishing their amount, and consequently relieving the pressure in the lungs. The author merely hazards this conjecture, in the absence of anything

more plausible. If this be so, little or no fluid should be swallowed, while this symptom is present. The safest and best plan of modifying or controlling this annoying symptom in the way of internal remedies, is the exhibition of some medicine, which will act efficiently and with considerable certainty on the liver. It is believed that all astringent remedies are decidedly mischievous in their tendencies. The most favorite remedy, acetate of lead, is hurtful and dangerous, as it leaves the digestive functions in a deranged condition for weeks and months afterwards. All the evidence of its efficiency is negative, for it is not always followed by a cessation of the symptoms; and whether that cessation would not have occurred just as soon without it, no one can deny, for in a great many instances, the symptom disappears when nothing at all is done. Therefore, as spitting blood certainly arrests the deposite of tubercle and modifies the cough, let it alone, if not large; but if the patient is much disturbed in mind by it, and must take

some internal remedy, let it be common salt, or some medicine which will act decidedly on the liver, but do not use astringents in any form whatever. It must be remembered, however, that spitting blood is a good sign, in the same sense that common boils are a good sign. Not signs of health indeed, but evidences that nature is attempting to relieve herself, by pushing the enemy out of the system. And inasmuch as this spittting of blood indicates the presence of tubercles, all the remedies should be persevered in, which are applicable to consumption itself, and not be intermitted, until for many months after it has ceased to appear, no—not while life lasts, for it so happens, that the true remedies for consumption are such as are calculated to build up, and maintain the general health, as it ought to be maintained, whether a man has ever been sick of anything at all, or not. For whatever keeps the general health at a high standard, keeps off consumption.

CURE OF CONSUMPTION.

This question is fully discussed in the eighth edition of a former publication of the author, entitled "Bronchitis and Kindred Diseases." Dr. Carswell, who stands in the front rank of educated medicine in England, says:

"Pathological anatomy has perhaps never afforded more convincing evidence, in proof of the curability of disease, than it has in tubercular consumption. Its curability has been satisfactorily established, and its PERFECT CURE DEMONSTRATED."

In confirmation of this opinion, a fact will be given, so conclusive in its nature, that upon it the decision of this subject may be safely rested. The full account is given in the *Transactions* of the Pathological Society for eighteen hundred and fifty-one, as published in London.

In May, eighteen hundred and forty-eight, a poor young girl made application at the hospital, for consumption, as an out-door patient. In July, eighteen hundred and forty-nine, she

looked well and coughed only in the morning. Subsequently, she appeared healthy, and required no more medical advice. In the winter of eighteen hundred and fifty-one, she had a stomach affection, and in four days died from bilious vomiting and diarrhœa. The body was opened, the lungs examined and preserved. Nearly the whole of the upper portion of the left lung was found destroyed, and presented the appearance of a cavity, such as mice leave in cheese. This cavity was lined with a hard substance, which prevented the extension of the destructive process. To give an idea of the extent of the loss of lung substance, the left lung was put in water and displaced only nine ounces, while the right lung displaced twenty-three ounces. Presenting, as Dr. Quain justly observes, "an example of the great length to which the ravages of consumption may extend, and yet be stayed."

From this single case, even if there were not multitudes similar to it, the following irresistible conclusion is drawn, that

Consumption, even in its last stages, when nearly one half of a whole lung is utterly destroyed, may be permanently arrested, and the person eventually die of some other disease.

It may be of practical benefit to note here, that the person was a poor girl, and had to work for her living; that she was an out-door patient, and had to walk to the hospital, in winter as well as in summer, alike exposed to the heat and dust of July, and the cold blasts of December, and had to put up with that plain fare and insufficient clothing, and warmth, which are common to the poor. It is quite certain, that if she had enjoyed all the comforts of wealth, she would have died. Instead of working for a living and an appetite, she would have spent her time in listless lounging, and forced the appetite by tonics. Instead of walking to the hospital, she would have been visited by the physician. Instead of exposure to summer's heat and winter's cold, she would have taken her airings in the luxurious carriage; and instead of occupying some crazy

tenement, through whose multitudinous cracks and crevices the bleak winter winds whistled mercilessly, she would have occupied a summer-heated apartment, with double windows and listed doors, with numberless shawls and mufflers and comforters, to protect her from any friendly whiff of pure air which might by stealth have found its way to her.

A gentleman remarked incidentally, a few days since, that four years ago, while doing a large dry goods business, his health was seriously affected, he became thin in flesh, weak and inactive. His friends freely predicted his death from consumption. Becoming alarmed, and being a man of decision and energy, he sold out, procured a birth for driving a milk cart round the city, rising at four o'clock of a winter's morning. Now, he is a perfectly well man! Quite a descent from doing a business of sixty-four thousand dollars a year, to selling milk at people's doors at six cents a quart. But this same independence, energy and decision, is the great secret of cure, in this fatal

disease. It is more than half the battle. If men could be made to feel this truth, multitudes might be saved from a consumptive's death every year, PROVIDED competent medical advice be steadily had, in the supervision of these out-door activities, to direct, control, and modify, according to the capabilities of the system.

Says the Edinburg Monthly Journal of Medical Science, for April, eighteen hundred and fifty-two, and endorsed by the London Lancet for June 12, of the same year, "The curability of consumption, is one of deep and paramount interest, for notwithstanding the abundant proof which has been accumulated of late years, it is still the opinion of the majority of the medical profession, as it is of the public generally, that common consumption is incurable. In those cases in which recovery would seem to have taken place, their having had consumption is doubted. It is no small matter therefore, to explode this fatal fallacy; fatal in a thousand ways. Hence we hail with more

than ordinary satisfaction such communications as the following from Professor J. Hughes Bennett, in a lecture in the Royal Infirmary at Edinburg:

"'Up to a recent period, the general opinion has been that consumption almost always marches on to a fatal termination, and that the cases of its known arrestment were so few, as to be merely an exception to a general rule. Morbid anatomy has now, I think, demonstrated that tubercles, in an early stage degenerate, and become abortive, with extreme frequency, in the proportion of from one-third to one-half of all the incurables who die after forty.'"

To make this statement in terms more familiar to the general reader, it is that in Scotland nearly one-half of all who die after the age of forty years have had consumption, tubercular disease, in its early stages, and have got well of it spontaneously. This shows conclusively that nature cures consumption in its first stages very frequently indeed; therefore,

all that the physician has to do is to observe how nature proceeds in her frequent and successful treatment of this very common disease. Dr. Bennett goes on to say, "Since these observations, however, have become known, it has been stated, that after all, practically speaking, consumption does not mean the existence of a few isolated tubercles, scattered through the lungs; and that what is really meant, when the cure of consumption is denied, is that advanced stage, in which the lungs are in a state of ulceration, and in which the bodily powers are so lowered, that perfect recovery seldom or never takes place. But here again, careful examination of the records of medicine will show that many, even of these advanced cases have recovered. Laenec, Andral, Cruveilhier, Kingston, Pressat, Rogée Boudet, and many others, have published cases where all the functional symptoms and physical signs of the disease, even in its most advanced stage, were present, and yet the individual survived many years, ultimately

died of some other disorder, and on dissection, cicatrices and concretions have been found in the lungs."

The general reader must remember that a "cicatrix" is a scar, which we all know to be a sign of a healing process, whether in the skin, in the bone, or in the lungs. "Concretions" are similar demonstrations of the healing process, more appreciable by the physician. As an illustration, the Professor then exhibited the lungs of John Keith, who died suddenly of congestion of the brain, Feb. 8th, 1844, aged fifty years. It was established that this man, at the age of twenty-two, labored under all the symptoms of a deep decline, and his life was despaired of. Yet he got well, lived nearly thirty years afterwards, and might have been living yet, had he not abandoned himself to drink. On examining the lungs, a scar was found a quarter of an inch broad and three inches long, with that puckered appearance around it, which proves a loss of substance, and this, with five or six chalky substances, all

surrounded with healthy lungs, gave evidence of cured ulceration to a very large extent, which no scientific man can possibly deny. Evidences of this sort are largely cumulative, and having dissipated the prejudices which have hitherto enveloped the lights of the profession, and when further unbelief would be considered very little short of fatuity, the most distinguished physicians of Great Britain and the continent have reviewed cases occurring in past years, in the light of these new developments, and have found themselves able to refer to cases which they are now satisfied have undergone a permanent recovery, even when cavities had existed in the lungs, and all the advanced symptoms of the disease had been present.

But to the great fact itself, nothing more can be added in the way of evidence than Keith's case. So deeply rooted, however, has been the opinion, of the necessarily fatal nature of this disease, that the generality of practitioners have concluded, that *because* consumptive cases

recovered, the disease was not consumption; that is, they have rather distrusted their own judgment, than ventured to oppose a dogma of general belief. But although the fact of the curability of consumption, even in its most advanced stage, can no longer be denied, it has been argued that this has been entirely owing to the operation of nature, and that the physician can lay little claim to the result; for it is not art which heals these caverns and leaves the scars; it can only favor this, by not opposing nature. But if this be true, it follows, that by carefully observing the operations of nature, learning her method of cure, imitating it as closely as possible, avoiding what she points out to be injudicious, and furnishing what she evidently requires, we may at length arrive at rational indications of cure.

In this connection, let the reader keep in mind, the one main idea in these pages, to wit, the principles of cure, out-door activities, compelling the mind away, pleasurably; for Keith began to recover from the time of his public

appointment, changing his residence and occupation, while his social condition was greatly improved, his office being agreeable and profitable; absolutely requiring daily exposure to the weather, remorselessly imperative, through all seasons, to be at his post at a specified hour, punctually, promptly, under all circumstances, short of an impossibility, *compelling outdoor exposures, regardless of weather or of feelings.*

THE PHILOSOPHY OF CURE.

One of the most important aids, in the cure of any disease, is an intelligent view of the nature and design of the remedies employed, with a rational hopefulness of ultimate success. Therefore, the attention of the educated and reflecting, is earnestly directed to an assertion of LIEBIG, the great chemist of modern times. It is not new, indeed, but it is a great truth succinctly expressed, embodying as it does, in a single sentence, in plain English, the nature of the treatment and cure of consumption:

"The amount of nourishment required by an animal for its support, must be in a direct pro-

portion with the quantity of oxygen taken into the system."

In other words, *To be fully nourished, the food we eat, and the pure air we breathe, must bear a just proportion.* Keeping in view the fact, that only out-door air is pure, and that all the functions of the body are kept in proper condition, by constant medical supervision, it is a favorite prescription of the author, in consumptive cases—

Eat all you can, exercise all you can. And in order to secure attention to so important a direction, it is added, *when you cannot exercise, do not eat.* If any thing, after breakfast, prevents your being out of doors actively, do not allow yourself to partake of an atom of food, until you have been out of doors actively. As a consumptive usually has a good enough appetite, but for want of digestive power, is not well nourished, gains no strength; there are few weathers which will keep him in doors, when the alternative is, "no exercise, no dinner." The truth is, the worse the weather, the more

need of being out of doors, in order that its enlivening influences should counterbalance the influences of "a rainy day, in a country Inn." *It is a groundless fear of the weather, which sends multitudes of consumptives to an early grave.* If we courted "all out-doors," with half the zeal we do in-door life, multitudes would live to old age, who now die before their prime. Let it be borne in mind, that nothing is curative of consumption, which does not promote nutrition; by which we mean, the perfect digestion of substantial food; and the most obtuse intellect is conscious that exercising out of doors, is the best appetizer in the world. A forenoon's shopping, a horse-back ride of a dozen miles, a fishing or a hunting frolic, a row boat or a drive into the country, will any day demonstrate, that being in the open air is a more sure tonic than any medicine from the shops. A tonic whips up the stomach, but unless the other glands, the other workshops of the system are also stimulated, it is very much as if a man should at-

tempt to regulate his watch, by making one wheel go faster, while all the others were arranged to move at the old rate.

As a general rule, the appetite of the consumptive is good enough; in fact, he eats enormously, but like a man with a tape-worm, the system is not nourished, simply because the lungs do not convey to the nutrient material, an amount of air sufficient to transform what comes from the right side of the heart, into life-giving blood. As before explained, it is the pure air, coming in contact with foul, imperfect blood, which makes that blood alive. And if that pure air is not given, that blood, or rather that mixed-up mass, made of the three different materials, the new nutrimental fluid, the blood which has just washed out the system, and the liquid made up of the other waste matters of the body, is not made alive, or if alive at all, the vitality is so low that it carries but little vigor to the distant portions of the body, hence there is no strength.

There are but few readers who have not

seen machinery in motion; to facilitate that motion, a superintendant is constantly oiling it, and the very motion of that machinery, works that oil off from the parts in motion, while the engineer removes it wholly. If ceaseless attention was not given, the machinery would be clogged up, and would soon cease to work at all. But the human body is a self-attending machine. Its Immortal Architect has so constructed it, that it oils itself, and removes its own wastes, and thus keeps itself clean, provided that one condition is observed—a condition imposed alike upon every living creature in the boundless empire of the Almighty—THE CONDITION OF ACTIVITY. Every twinkle of the eye, every motion of the finger, every beat of the heart, every thought of the mind, is at the expense of the death of some atom of the body, just as certainly as every letter conveyed along the telegraph wires, is at the expense of an appreciable amount of acid in the generator. But this oil of the machinery, which has subserved its purpose, must be removed, these

dead atoms of the body having answered the end of their creation, must be conveyed out of the body. As in the battle field, the multitudes slain are removed as soon as fallen, that they may not impede the living; so every particle of matter, now dead, but full of life a single minute before, must be removed from our bodies, just as instantaneously, otherwise these *heaps of slain* would impede and clog up the whole machinery, spreading putrefaction and death to its remotest limits.

How are these dead particles removed? There are millions of little agencies in the system, which convert these dead atoms into fluid matter, which is then drawn up, and conveyed eventually out of the body. But these little agencies do not operate, unless the body first moves. The instant the body exercises, that instant these agencies answer to it, as instantly as the machinery of a watch answers to the first movement of the fly-wheel. Hence, in proportion to our bodily activities—when not excessive, *when not excessive*—WHEN NOT EXCES-

SIVE! are these waste matters perfectly and instantaneously removed, all its joints and wheels and slides are kept clean, and like to a well attended machine, it seems to work without an effort, but unlike the machine, it is a pleasure for such a body to work. Thus it is, that a healthy, industrious man, would rather work than not, because his habits of activity keep the machine in such order, that motion is a pleasure.

But it must occur to the reader, that if bodily activity is destructive, and then removes the dead atoms, these must be replaced by fresher particles, by new recruits; and so it is. The measure of this supply is Instinct: we call it appetite. In proportion as new atoms are needed, we are hungry. The more exercise we take, in moderation, the more hungry we are, the more food we can eat with satisfaction. Thus it is, that while exercise carries off the dead atoms, it lays the foundation for a new supply, the activity of removal corresponds with the activity of replacement and the

whole body is kept new and fresh and strong, as we see exemplified in the steady vigorous health of those who are temperate in the indulgence of their appetites and industrious in the observance of laudable activities.

Reason then, and philosophy, and common sense, all join in impressing upon us the all-important fact, that in a disease like consumption, whose prominent and ever present feature is a wasting away, we must look for remedy to substantial food and out-door activities.

In view then, of the efficiency of moderate exercise, in the open air, for a great portion of daylight, in promoting the arrest, or permanent cure of common tubercular consumption, medical attention is earnestly invited to the following three inquiries; and it is hoped that the observation of all intelligent persons will be turned to the same points, because, consumption is so common a disease, there ought to be a general intelligence in reference to its nature, its prevention, its retardation, and its cure:

1. Have you ever known a case of apparent or supposed consumption cured, unconnected with free exercise in the open air, at all seasons?

2. Has any form of treatment, without active exercise out of doors, materially protracted life in any case of active consumption?

3. Have you ever known a single case of true consumption averted, arrested, or permanently cured by bleeding, by medicinal means, by stove rooms, by removal to a warmer or colder climate, unconnected with out-door activities?

It is the author's conviction, that instead of turning over the treatment of consumptive cases to patent medicines, to secret remedies, to advertised nostrums, to those who attend to that disease exclusively, or to the heartless and brazen faced pretenders to almost infallible skill, or of abandoning the patient to the routine or stereotyped prescriptions of a sea-voyage, or southern climate, or tartar water, digitalis, opium, cod-liver oil, brandy and salt,

and the multitude of other empyrical and fallacious remedies, every educated practitioner should take in hand every case of consumption that presents itself, with the hope of possible, if not probable restoration, directing his utmost energies to these two points, so to medicate the system, as to enable the patient to be most out of doors, without actual fatigue; and to digest most thoroughly the largest amount of substantial and nutritious food.

If educated medicine should concentrate all its energies in bringing about these two conditions, it is firmly believed, that even consumption would become a manageable disease, and no longer continue an approbium to the profession.

MEDICATED INHALATION,

Or the breathing of an atmosphere impregnated with the fumes of medicinal substances, as a cure for various ailments of the air passages, has largely attracted public attention of late. It was not intended to have noticed it at all, but it may be instructive, as a matter of

future historical reference, to refer to a dying delusion.

The well-read physician of all schools, is familiar with the fact, that this has been proposed, practised and discarded, over and over again within two centuries, to be proposed, practised and discarded again, like the fashions of the streets, or the squabbles of the schools; or like the attempts to discover perpetual motion, always made by ignorant or designing men. An educated physician would no more attempt to cure consumption by inhaling medicated air, than a finished scholar in the natural sciences would revive the attempt to construct a self-moving machine, because they *know*, that in the very nature of things, they are impossibilities. And the superficiality of modern medical education has been strikingly demonstrated by the great numbers of letters written from all parts of the country, by young practising physicians, for information as to the truth of Medicated Inhalation, as a remedy for ailments of the air passages. The tone of these

letters, their spirit, the peculiar something, which ran through the whole of them, indicated a want of intelligent, independent and confident Amor Propriæ of Old School medicine, both mortifying and irritating. Some of the medical Journals even, seemed to be falling into the current of the delusion. No louder call has been made during the present century on our medical schools, for a radical reformation, than has been incidentally made by the revival of a so long exploded theory. It calls for a reformation, deep, radical, thorough. What is wanted, is fewer schools of medicine, at least a decimation of the present number, abler professors, and a stern, uncompromising requisition of a thorough classical collegiate education, together with an amount of *natural parts* in each applicant, which would secure him eminence, if employed in the direction of the bench, the pulpit or the halls of legislation. Heretofore, in order to make a clergyman, it was necessary to have a solid education; or if a lawyer, the gift of gab was indispensable;

but when a youth was too much of a numskull for the pulpit, and too stupid for the bar, and too lazy for any thing else, he has been sent off to a medical school, where money could secure a diploma, and to be mum, was the talisman for medical success.

A few facts may be more convincing to general readers, than any amount of logical argument.

In the first place, nearly the entire press of New York city, political, neutral and religious, was subsidized to the advocacy of "Inhalation." This attracted attention, and multitudes flocked in to touch the bubbling waters. Cases of "cure" were called for. But it was answered, that time had not been allowed to verify them. But at the end of years, not a single individual of "standing," has, as far as the writer knows, come forward to declare—

"*I have been cured of consumption by means of Medicated Inhalation.*"

A New York physician brought a friend to the author for examination and an opinion as

to the nature of his case. He was a stout, compact looking man, flesh full and firm, pulse sixty-eight, breathing seventeen in a minute, appetite good, bowels regular, sleep sound; the lungs gave their full measure. After having pronounced him free from any consumptive ailment, he remarked that the principal inhalist of New York had been consulted, and declared that one of his lungs was in a state of decay.

Yesterday, October 14th, 1856, a gentleman called for medical advice. The author gave a written opinion as follows: "Yours is a case of common consumption. One half of the lungs are inoperative and decaying at this time. Your comparative youth, wiry constitution and recuperative power make it probable that you may, once more, have reasonable health."

After handing this gentleman the paper, he said he had thought he might live until spring, and had made up his mind that his lungs were decaying; that he had applied to an Inhalationist, who assured him that the greatest trouble with him was, an affection of the kid-

noys. He commenced inhaling, with other means. In about two weeks his cough seemed to tighten, and he began to spit blood. He left off inhaling for two weeks, when the bleeding disappeared. Inhalation was resumed; the bleeding and toughness of expectoration returned. He declined to follow the treatment further. He stated that he had been induced to try it, from its appearing reasonable, and from the noise made about it in the public papers. This gentleman is neither obscure, unknown, or poor. His worst symptoms were cough, debility and shortness of breath, having fallen away thirty pounds. Why the lungs of a perfectly healthy looking man should have been pronounced in a state of decay; and of another whose lungs were decaying, it should have been said, that the kidneys were the parts which most required attention, and yet inhalation recommended, is suggestive to reflecting men.

A young lady applied to the author for medical advice. Attending physicians had

pronounced her case a hopeless one. She was soon able to leave her bed, then her room, and "undertook a journey from Newark, New Jersey, to Goshen, New York. On her return," says her brother-in-law, a clergyman, "she took cold, her old symptoms returned, and through the influence of some one, Dr.——, of medicated air celebrity, was called. He saw her; said the case was a hopeless one; too far gone, but he would try and see what he could do. He furnished the apparatus, gave directions; the medicated air was inhaled. A few days after, spasms or convulsions seized her. From this time, she rapidly sank, and after suffering greatly, died, in the sweet peace of the Christian's hope."

This case is presented as being one of thoughtful interest. A year or two before, this most interesting and accomplished young woman, applied to the author, under circumstances of great suffering; her friends, hopeless of her recovery; it was treated as a spinal affection, masking consumptive symptoms. In due time she ceased to require special medical

advice. Some months afterwards, a disappointment, under the opposition of friends, produced convulsions and temporary insanity; pronounced hopeless of cure by the physician in attendance. The author was called on a second time, and with the previous light on the case, she was rapidly restored. On being taken ill again, instead of applying to the physician who had twice saved her, "friends," who had no life to lose by making a mistake, gave counsel to apply to a stranger. for remedies proclaimed to be new, and if so, needed the test of time to make them reliable.

All know that consumptive persons do not die with convulsions. The conclusion is therefore legitimate, either the disease was mistaken, or the remedies induced the convulsions and hastened a fatal termination. If it was consumption, the remedies induced the convulsions; if it was not consumption, the remedies were inapplicable, and by incurring loss of time, caused a loss of life.

Had convulsions supervened on the employ-

ment of ordinary medical means, the fashions of the times are such, in some parts of our country, that these same friends would have brought an action for damages or for manslaughter.

In the long run, the regular physician is benefited pecuniarily and morally, by the introduction of every such delusion, and by the sale of every bottle and package of patent medicines in the land. In both cases, chronic diseases are ultimately engendered in the system, over which secret remedies, and presumptuous ignorance have no power, and in the last sickness of weeks and weary months, the regular physician is called in, and uninterested administrators and hungry heirs, pay large charges willingly.

It is safe to infer that other physicians, temporarily left for the new cure, have had their patients return in nowise benefited by months of inhalation.

A gentleman from a sister city wrote two months ago, "You have protracted my life for

years, but I would like to try the merits of Inhalation, about which so much is said." The answer was, "Try it. It will prove hurtful, inefficient or beneficial. You have intelligence enough to decide as to these three points, and in any event, your testimony will be reliable, and a public good will be gained. Only make a thorough and a fair trial, and I shall look to your report to me with peculiar interest."

At the end of a month or more he called to say, he was doing well; he had done so before, and could not say it was owing to inhalation.

The author advised, "As long as you are doing well under any course of treatment, it is fair to give the credit to that treatment, at all events to continue it as long as it seemed not to do a positive injury." No later report has been received. But this case and that of the young lady, show alike how even educated minds allow a confidence to grow up seemingly founded on nothing else but the apparent confidence with which the abettors of delusions advocate them, the opinions of sci-

entific men, perfectly at home in such matters, counting nothing.

A later letter, received before the above was put to press states, "I think my present condition is a very precarious one, and that my disease for five or six weeks past, (except last week,) made more progress than it has done in two years' time before. I am in hopes to get to New York after the election, purposely to see you, and be where you can see me daily, to see precisely where I am, and ascertain as far as you can, my true condition, and advise with you what is best to be done. I am gradually doing away with Inhaling. I thought that better than to leave off all at once."

From the above statement it appears, that after Inhaling three months, spending several hours each day in a room having the air impregnated with the fumes of some medicinal substance, he came to the conclusion that in the latter part of that time his disease had made more progress than it had done in the two preceding years, excepting the last week,

during which there had been an improvement. Perhaps that was because the inhalation was about showing its good effects. Such will be the grounds taken by its advocates. And the candid reader doubtless regrets that the experiment had not been continued, at least a while longer.

But it is time to pass to another topic, desiring the reader however to read the above letter again; and notice the three words indicated in brackets "*except last week.*" There are two important points connected with this "last week."

First, He was gradually abandoning Inhalation.

Second, In another part of his letter he writes, that he had "been attending the great Horse Exhibition all the week, which has kept me out-doors, in the open air, most all the time. My opinion is, if I could have something to occupy my mind and time, out-doors, six or eight hours a day, that it would be one of the best medicines I could apply to my case." The

author had urged this gentleman a year before, by every consideration, to take a long and continuous horse-back journey, as the most applicable means to his case, and promising the largest beneficial results.

It is reasonable to infer, that if at this late time, a single week's interested occupation in the open air, for a greater part of every day, had not only arrested a rapid running down of a month's continuance, but had actually begun to set up an improving condition, the proposed journey wisely conducted, a year earlier, would have resulted in benefits to him of incalculable value.

I connection with this, a co-incident fact may be stated with advantage, not only as to the inefficiency of Inhalation, but as to the value of out-door activities, in affections of the lungs.

The first impetus given to Inhalation in New York, was the certificate of the mayor of a neighboring city, as to its efficacy in the case of his wife; this was in eighteen hundred and fifty-four. Two years later she was still an inva-

lid. A year ago, she resorted to daily rides in the open air, and one of the members of her family stated it as an opinion, that "she had derived a greater benefit from such exercise than from any means she had employed." This statement of one of her children, was reported to the author, by the gentleman to whom it was said to have been made. It is given merely as a report. The reader can put such a value upon it as he may think it merits; the other part of the statement is of public notoriety.

Many people appear to have an all-controlling fear of exposure to the weather, yet will exhibit a degree of reckless indifference to health in other directions which is amazing. It may be useful here to append part of a letter from a young lady who was a short time under treatment for a throat affection; she was a most beautiful singer, not less beautiful than herself, and her loss to the village choir at church would have been a public calamity:

"I do not go out much in the evening air. I was invited about two weeks ago to go a sail-

ing in the afternoon, the gentlemen promising to have me home by seven; but when we started for home there was not the least wind, and there we were. After a while there was sufficient to help us on, but that was the last of it; it was nine o'clock in the evening, and no prospect of getting home. At last it was proposed we should go on shore and walk home, a distance of nearly two miles; they felt worried on my account, for I was getting hoarse, and they knew we should not get home before morning. The ladies were all willing, so they managed to get the boat to the shore, and get us off. I, with unusual prudence for me, had taken a large shawl and my overshoes. It was very well I did, for our passage from the boat to the shore was not a very dry one. It was a mild warm evening, but I had my shawl on: this, with walking, made me perspire freely. On reaching home, I went into a warm room and remained there until I got cool and the perspiration had ceased. The next morning my hoarseness was gone and my cough a

great deal better. So I think it helped, rather than harmed me. It might not do to repeat the experiment too often. S. W. M."

The one thing which made this sailing excursion a benefit instead of an injury; which left all the symptoms better, instead of worse; the thing, the neglect of which has laid the foundation of life-long sickness and premature death to multitudes, and which will continue to do so, until men and women begin to feel that the study of health is a duty, is simply this; her going into a *warm* room at the close of her exercise and THERE REMAINING, until perfectly cooled off. This precaution she had learned from a previous letter, and it was only necessary to reply to her, that a repetition of such an excursion every few days would cure her. But in spite of the benefit, the reader will note the inveterate prejudice at the close of the letter. Had any medicine removed the hoarseness and so much abated the cough in a single night, and especially a patent medicine, its praises would have been com-

mitted to record and published millions of times, in the course of coming years.

It ought to have been conclusive of the worthlessness of Inhalation as a radical cure, that educated physicians had abandoned it ages ago; because upon full and fair trial, it was ascertained, that while there was nothing radically curative in it, the temporary or apparent benefits which attended its employment, were more readily attained by means more generally practicable and more facile of application. The force of this inference was sought to be broken, by the assertion of an acknowledgment of the inefficiency of these means heretofore, but that the discovery of a NEW remedy, placed it in the power of the practitioner to warrant it one of the most important discoveries in medicine, of modern times; while the ineffable stigma of concealing an important remedy from the knowledge of the profession, was parried by the announcement, that the nicety of its application was such, that the discoverer could not make physicians understand,

in any given instance, how to apply it; that only the discoverer could decide, lest in a particular case, it might be "too much or too little, too hot or too cold, too strong or too weak," but that as soon as it could be done consistently with the safety of the interests and reputation of the discoverer, the whole thing would be thrown open to the medical world.

With such subterfuges as these, unprincipled characters and adventurers have in all ages made dupes of their race, and all-trusting, have led them blindfold to the grave. It is not the business of a practitioner of medicine to seek out and expose these delusions; his province is to save the sick and ease the dying. The *caveat emptor* is a principle of universal application, and not confined to barter and sale. The author cannot remember one name in medicine that acquired a reputation rapidly, from any cause, and permanently retained it. Sir Astley Cooper's receipts for medical services for the first year in London amounted to twenty-six

dollars, it was not until an age had passed that they reached to a hundred and fifteen thousand dollars a year. And yet, within a year after the announcement of Medicated Inhalation as a cure for consumption, thousands had crowded forward to test the remedy; offices were opened in every considerable town in the land; and in another year, few except the desperate are so weak as to try it.

ASTHMA,

In its common form, is generally considered as allied to consumption; the cough, expectoration and shortness of breath, being common to both.

In Asthma, the cough prevails when the attack is about going off.

In Bronchitis, the attack is equally troublesome during the whole twenty-four hours.

In Consumption, the cough is more on going to bed and getting up, while during the day and during the night, it is not special, except in the more advanced stages of the disease.

In Asthma, the patient has good health

during the interval of the attack; those intervals are from days to years, according to the phase of the disease.

In Bronchitis, the health suffers all the time of its presence.

In Consumption, there is generally some portion of the day, during which the patient feels comparatively well.

In Asthma, there is no cough at all, until the violence of the attack is passed, which is after the turn of the night, when the symptoms begin to ameliorate.

In Bronchitis, the cough comes on whenever there is phlegm to be dislodged; and then, there is temporary relief, to occur at any hour of the day or night, for dozens of times.

In Consumption, there is most cough on going to bed, and on getting up; whether there is phlegm or not.

In Asthma, the breathing is worse in the fore part of the night.

In Bronchitis, it may recur any hour of the

twenty-four, when phlegm is about being dislodged.

In Consumption, the shortness of breath on all ascents, is ever present, day and night alike.

In Asthma, a single step, the raising of the arm, the crook of the finger, the utterance of a word, seems almost to take away the life, for a few hours.

In Bronchitis, the patient can walk very well.

In Consumption, locomotion on level ground does not require an effort.

In Asthma, there is no destruction of the substance of the lungs.

In Bronchitis, the lungs are entire.

In Consumption, the lungs are in a state of decay, and are growing less, steadily.

In Asthma, a person may have perfect health *in the intervals* of attack.

In Bronchitis, there may be a perfect and permanent recovery.

In Consumption, there is a steady progress to the grave; and where there is a per-

manent cure, the patient can never be as perfect, because a part of the lungs have been destroyed and they cannot be replaced.

In Asthma, the lungs are all there, but the patient cannot get enough air out; it is confined in the lungs, distending them distressingly.

In Bronchitis, the lungs are entire, and the air is confined, but may be liberated by the dislodgement of a plug of phlegm, at any hour of the twenty-four.

In Consumption, the lungs are partly destroyed, and the patient cannot get enough air into them, to answer the purposes of life.

These are the parallels in reference to the ordinary forms of these three diseases. Asthma rarely, very rarely, indeed ends in consumption; it is antagonistic of that disease. It seldom destroys life, until the patient is advanced in years. It is incurable. The attacks may be warded off, indefinitely, by proper care and medical counsel. Asthma is always brought on by a bad cold or a torpid condition of the liver and bowels, which last, most probably,

laid the system liable to the cold. The author believes the profession will find, that by keeping the liver in proper daily action, the feet warm, the appetite and digestion vigorous, the most inveterate asthmatic, (if it is not continued asthma,) may ward off attacks for a life time.

IMPORTANT CONSIDERATIONS AND DEDUCTIONS.

Half of all the adults dying in London between the ages of twenty-one and forty, are the victims of lung diseases; and so, doubtless, of other large cities and towns.

As consumption is from two to twenty years in developing itself, after the seeds of it, in the shape of tubercles, have been deposited in the lungs, it is a legitimate conclusion, that the foundations of it, are laid between the ages of sixteen and twenty years, while the young are yet under parental control. These things being so, every father and mother in the land, as they value the earthly happiness of their children, as they value their offspring's exemption from a life of weary suffering and a premature

death by a fearful disease, are hereby, even conjured, to make that period of the lives of their sons and daughters, the object of their special and daily supervision; and at the sacrifice of every thing else, to require and command and impel, the utmost regularity in eating and sleeping and exercise; to allow no day to pass without full eight hours for sleep, and full six hours out of each twenty-four, for out-door exercises of an exhilarating character, in walking, running, swimming, hunting, fowling, base ball, cricket, rowing, but beyond and above all, riding on horseback, from a trot to a gallop, the faster the better; giving the preference in these forms, to *continuous* journeys, with an agreeable companion and a profitably animating object in view. For all our observation, but accords with the quaint language of Sydenham, the great father of medicine, some two hundred years ago:

"*The palmary remedy in Consumption, is daily riding, which is all in all.*"

No cough remedy ever yet sold as a patent

medicine, has afforded any real, radical good, in any single case; but does, in all instances by interfering with; and deranging the action of the stomach, liver and bowels, aggravate the malady and render it more speedily and certainly fatal.

Of any consumptive reader of these pages it is asserted, on the most convincing grounds, you will find by multifold experience, that however, almost miraculous, may have been the benefits derived by others, from the thousand and one remedies which the mistaken kindness and humanity of friends may propose for your trial from time to time, in your case, they will be utterly inefficient of any radical benefit. Temporary relief may be afforded, only to aggravate the symptoms ultimately, or to lose valuable time.

It is the author's deliberate conviction, as to the remedial powers of other agencies in curing consumption, such as Medicated Inhalation, Cod Liver Oil, Brandy and Salt, Alcohol, Whiskey, Brandy, Beer, Ale, Porter, swabbings

with Nitrate of Silver, all of them, are utterly inefficient, as to any permanent radical effect, towards the cure of consumption; and that by their temporary and deceptive ameliorations, they but lose invaluable time and lure but to destroy.

A simple statement of the actual effects of alcohol, in any of its forms, as a remedy for consumption, or for any other disease, is sufficient to convince thinking men, not only of its inefficiency, but of its positive hurtfulness.

Alcohol exhilarates the brain, but imparts no strength to the muscles; as witness the tottering toper and the fallen drunkard, as helpless as a log.

Scientific observations have established the fact, that the more a man drinks, the less carbonic acid gas is carried out of the system by the expired air; it must, therefore, be retarded and must accumulate, rendering the blood more and more impure, blacker and blacker at each breath, and all know that black blood indicates mischief. One of the most important offices

of breathing is to remove from the blood the carbonic acid gas, while drinking alcohol retains it. Every expiration in health, goes out of the body loaded with this gas; if a single breathful is arrested, the instantaneous and instinctive struggle of nature for relief, shows her appreciation of the danger. Witness the slow breathing of the drunken man, how more and more helpless he becomes each moment under it.

Further, it is demonstrated, that even in moderate drinking, the total amount of bodily excretions, in a given time, is less than when no liquor has been swallowed; and all know that the arrest of these excretions, even to a limited extent, is the certain cause of disease, diminishing the heat of the body, thus thickening the blood and clogging all the wheels of life; every manufactory is deranged, every gland disordered. Consequently, the presence of alcohol must impair nutrition, the very function which, of all others, it is important in consumption to maintain in its highest integrity.

The use of alcohol, then, is doubly hurtful in consumption. By impairing the vital functions, the wastes of the system are not perfectly dissolved into fluid and gas, their more solid particles remaining; and for the same reason, the food is not converted into a perfect blood material; hence the particles which it bears on its tide to the various parts of the system to repair its wastes, are imperfect; consequently the repair is imperfect and incomplete; thus it is, that in drinking brandy, porter, lager beer, and the like, there is an appearance of improvement, a seeming increase in flesh, but it is not a solid flesh, while the strength itself is not increased at all. Even this apparent improvement continues only to a certain point, when it abruptly ceases, and the system sinks rapidly down. The same holds good as to the use of the various oils in consumption.

Notwithstanding the almost miraculous efficacy of out-door activities in arresting and curing consumption, the necessity of having an intelligent and skillful and attentive physi-

cian to watch over each case is imperative, for the following reasons, among others:

On the very threshold, it is of primary importance to ascertain the exact nature of the disease, whether, instead of being consumption, it be not some one of those other ailments, which put on some of the appearances of Consumption, but are so different from it, that if the same activities were employed as are recommended as available in consumption, a speedy aggravation of all the symptoms, and ultimate death, would be inevitable; such as disease of the heart, spinal affections, and the like.

The conviction that one has consumption, is of slow growth, and comes at so late a period, in too many instances, that the necessary outdoor activities are, at the time, an impossibility; then, all the intelligence of the most experienced practitioner is required to devise those substitutes, which may prepare the way for more efficient measures. It is in circumstances like these, that nature may be most

advantageously aided by medicine, to create and sustain that appetite and digestion which so wonderfully follow active employment in the open air.

But in almost all cases of consumption, some one symptom is so prominent, so aggravated in its character, and so distressing, that its amelioration is not only a necessity, as far as personal comfort is concerned, but would actually retard the progress of the disease, and in some instances, prevent a speedily fatal termination, as diarrhœa, profuse spitting of blood, exhausting night sweats, and indigestion.

As to the cough in consumption, a very attentive consideration should be given. If it be loose and free, and something is readily brought up, then, by all means, no interference of any description should be allowed; but when it is dry and hard, when the greatest straining is requisite to bring up any thing at all, it is from one of these principal causes: 1. Actual fever. 2. A general irritation. 3. The turning point, when tubercles are about

to set up actual disease. In either of these cases the constant jarring and straining of the lungs by the fruitless cough, not only wastes the general strength, but hastens the development of tubercles. Under such circumstances, it is of high importance to modify the cough, and the remedies employed are essentially different, according to difference of cause, and none but a patiently thoughtful physician can decide and act in the premises.

Then again, there may be a temporary cause of cough, operating at a distance from the lungs. Some of the most violent paroxysms of cough, lasting for hours at a time, without cessation, have arisen from some article of food taken into the stomach which it has not been able to digest, and it has remained there for hours, irritating and disturbing the whole digestive machinery; when a slight emetic will bring from the stomach, a foul, sour mass of undigested food, the fumes of which are horrifying, and in twenty minutes the patient will be sleeping sweetly and soundly.

Sometimes the cough arises from constipation or cold feet, when a different class of remedies must be employed, only to be done wisely and well, by the educated physician. From these statements the reader can comprehend the amazing folly of the multitude, in the purchase of cough medicines and taking them indiscriminately for the cough, regardless of the nature of its origin or its locality, whether in the spine, the food, the liver, the stomach, the throat or the lungs. And nothing can exceed our utter detestation of the unblushing empiricism in indiscriminately prescribing the nitrate silver swabbings and medicated inhalations and abdominal supports, and bungling but costly shoulder straps and braces, whenever the sound of a cough is heard, regardless of its true causes. Relieving men of their money by false pretences is a criminal offence, consigning the culprit to the same cell with the incendiary, the horse-thief and the manslayer; but to defraud the unsuspecting and confiding of their health and of life itself; to do it know-

ingly and deliberately, in the long practice of years, and often under the plea of humanity; and to aid and abet such by throwing open the columns of the newspapers, political, neutral and religious, to the dissemination of these falsities, for the price of a few dollars, may well "cause us pause," and leave us in doubt, whether to be most astounded at the wickedness of the dupers or the ignorance of the duped.

THE BEST LOCALITIES.

The best place for a consumptive, is a dry, cool, still locality. Damp places, raw winds, and sultry latitudes, are in every way injurious.

From the first of December until the first of April, a large city is the best place. For those months of the year, New York city is the most desirable spot in the Union for persons suffering with consumptive disease, under all the circumstances, and for reasons that none can so well appreciate as the stranger and the poor man.

A man may ride along the finest road in the world, in a wheeled vehicle, for less than two cents a mile; to wit, along Broadway on an omnibus. He may thus travel fifty miles a day, for less than a dollar, having a variety and a novelty in every rod of his progress, not attainable on an equal amount of road on the face of the earth. And then, there is safety, if a man is civil. Omnibuses never capsize, their horses never run away, their drivers never go to sleep, and will take you in as often as you apply for a ride.

If walking is preferred, there is the advantage of walking any distance, and then riding in case of rain or fatigue or accident, while the opportunities for rest and for spending an hour pleasurably, are almost without limit. Walking in the country, in winter-time, is out of the question. In New York, the sidewalks in the principal streets are available all the year; then there are reading-rooms, lectures, concerts, operas, picture-galleries, libraries, churches, society reports, and various other

opportunities of whiling away an hour in an interesting and instructive manner; which in a remedial point of view, is of the very highest value.

For, let it not be forgotten, that many an invalid thinks himself to death. And none but the sick can ever know the dreariness of spending hour after hour in the same house and room and fire-side for weeks and months together; while the relief is but small to take a walk in the same one street of a country village, or along the road by a farm-house. The fact is, restoration from consumption is not to be looked for unless the mind is constantly compelled away from itself, and from its companion, the body, and is fixed on something interesting, agreeable and profitable. It is hoped that this idea will be kept ever in view.

It is also a consideration, which will bear reflection, that in a great city, the patient may have the medical advice of the most eminent

men of the "SCHOOL" which his prejudices may most favor.

From May until November is the season for continual horse-back journeyings. The preference should be given to hilly countries, as exercising the muscles of the body more variously, as affording a purer atmosphere, a greater simplicity of diet, and a more impressive scenery. The grandeur of the mountains of Pennsylvania, the beauty and mildness of the hill country of East Tennessee, and the Blue mountains of the Old Dominion, would delight the traveller for months together. A most lovely excursion for a company on horseback, would be in September and October along the shores of lake Superior, in Minnesota, and about the falls of the classic Minnehaha; remembering in all journeyings to have an agreeable and profitable object in view; and to make it a matter of principle to prosecute those journeys, day after day, regardless of the weather.

There is a region of country about Cochecton,

in Sullivan county, New York, on the Delaware river, and the line of the Erie Railroad, which is remarkable for a fine, clear, dry atmosphere; it is very hilly and affords good hunting for deer, quails, squirrels, and an occasional bear, for variety. It must be remembered, that whatever may be the advantages of a locality, there must be something connected with it, which will strongly invite the patient from the house. It is the out-door part of any locality which possesses the curative quality in Consumption. If the patient will cling to the house, and loll on the sofa, and hover over the fire, when the weather is a little cold, one place is as good as another, for he will die any how. There is such a deep-rooted fear of taking cold by going out of doors, and by encountering changes of weather, that when persons do go to a favorable locality, its benefits are allowed to be lost, in a great measure, by going out only in pleasant weather. Four years ago, a consumptive looking young man, fair complexion, narrow chest, with pains, cough and spitting

blood, obtained a conductor's place on the Hudson River Railroad. Two years later, he reported himself well, and appeared to be so, and seemed to feel surprised that such a life had agreed with him so well. When three things are remembered:

1st. How seething hot the cars are kept on that line in winter time.

2d. How cold the winds are capable of blowing on the banks of the Hudson at that season of the year.

3d. How many dozens of times a conductor has to pass out of one car and cross into another in a single day, and that these changes do not destroy those who are well, but actually restore the sick—the inveterate prejudice against sudden changes of air must be swept away like

> "The baseless fabric of a vision," and
> "Leave not a trace behind."

Dr. Kane, the Artic navigator, was in the feeblest health in the waters of the Gulf of Mexico, in summer time; six months later he

was among the ice-bergs of a polar sea, and there remained for two years, returning in better health than when he left. But since his return his health declines again, and yet public papers assign as a cause, his exposures in his northern journey, thus perpetuating a prejudice and reversing truth.

The greatest obstacle to be met by the physician in carrying out the remedial means advised in these pages, is in the patient himself. In many cases where these means are practicable, business ties have such a hold on men, that it is impossible almost to sever them.

A gentleman of position, of education, and of wealth, writes: "I think my symptoms are very unfavorable, but I may weather the storm for a while longer. It don't discourage me in the least. Your idea of a horseback journey is no doubt among the best for me, and I have thought of it many times. Perhaps you will say, 'Why don't you go?' Well, there are several pull-backs and reasons which have, and still do, prevent me; and perhaps they

will, until 'tis too late, if not too late already."

Such then being the inveterate prejudices and ignorance as to the nature of consumption and the means of removal; and such the difficulty of inducing persons to attempt the remedies, when they have time and money to enable them to do it; and when too, their intelligence and observation alike convince them of the efficacy of those means; the physician is tempted to turn away in despair of cure, and to concentrate his whole attention on the prevention of such a death-dealing malady at a time when the seeds of it are usually sown, as detailed in pages ninety-one and two hundred and forty-three, by compelling children to engage more in out-door recreations, to live lives of regularity, system, temperance, and useful industries.

SOUTHERN CLIMATE.

It is a standing direction to go to a warmer climate in threatened or actual consumption.

Warm weather takes away the energies of the healthiest among us, and the universal ex-

perience of physicians and patients is, that it debilitates consumptives greatly. If warm weather at home debilitates, how can it fail to debilitate when away from home?

The chemist knows there is more nutriment in a pint of cold air than there is in a pint of warm air, because it is more condensed. It is a conceded point in consumption, that the larger the quantity of air the patient can consume, the greater are his chances of recovery. The fewer lungs he has, the more reason there is that he should consume the most concentrated and the purest air there is. Besides the rarefaction of a southern atmosphere, it must necessarily be loaded with vapor, and partly so with miasm, the fruitful cause of violent diseases. These suggestions will bear study.

In some liver affections, the person loses flesh, pales away and with more or less cough, the friends become alarmed, and fear that he is going in a decline. He is sent South, and relief from business cares, change of air and scene, and food, and habits of life, soon restore

him, and he returns home a well man. And, like the drawing of the highest prize in a lottery, the one success sends thousands on the same errand, to meet with a hopeless failure; for, in the first case, it was a disease of the liver, which readily yields to the remedy, because it was applicable, but in the other case it was a disease of the lungs, which, if in the advanced stages is rendered more speedily and certainly fatal. In forming consumption, out-door activities abate all the symptoms, and the patient hurries home, feeling well, but not having kept up these activities long enough, the tendency to disease of that kind has not been fully broken up, a habit of health has not been established, and slight causes bring a return of the symptoms, and you see such persons going to the South every winter, until the system loses its power of recuperation from these fitful efforts, and the final result is, "died of consumption" the very case that had been noised about a few years before as having been cured of consumption by going to the South.

Thus it is that the gross error is kept alive, and is almost a universal belief. A few years ago, a gentleman of note sufficient to have his movements chronicled in the papers, left home for a throat affection, with a view to spending a winter in the South. Circumstances led him to call on the author for advice, in this city, and he returned home, and is in good health to this day. But shortly after his resumption of professional duty it was announced in the papers that this gentleman's visit to the South had fully restored him.

It is a significant fact, that the British government sends its consumptive soldiers from its Southern stations towards the North. The reader is referred for statistical statements on this subject to *Bronchitis and Kindred Diseases*, 8th edition.

Very much has been said of Italian skies, and of the South of France, but the simple fact that the natives of these localities do not reach the average of human life which prevails in England and more Northern latitudes,

is an unanswerable argument sgainst the salubrity of those far-famed localities.

Foul air, whether malaria or miasm, whether warm or cold, will generate consumption wherever it is habitually breathed. It is *impure* air, any air that has in it any ingredient not designed by nature, is what breeds consumption and death in all its habitations. The idea that fever and ague localities are exempt from consumption is theoretically and actually unsound, for whatever lowers the powers of life lays the foundation for consumption; the emaciated forms that lounge about where chill and fever prevail, have but a single step to make to be in advanced consumption.

The infatuation for a southern climate is such, that in cases where it becomes impracticable, an attempt is made and much study has been given towards accomplishing the breathing of a warmer atmosphere, and Respirators of various patterns and principles have been devised to bring about this result. But a single reflection ought to be sufficient to ex-

pose the absurdity of their employment. If they prevent the cold air from coming in, they prevent the warm and wholly poisoned air from going out, and in proportion as the warm air tempers the cold air, in the same proportion does it make it incapable of sustaining life. Great Nature shows her abhorence of the air which passes out in the act of breathing, by giving it constituents which cause it to ascend where it cannot be rebreathed, the instant of its leaving the body, as can be seen of a frosty morning. If a man could rebreathe a breath of his own or of another person, without a mixture with pure air, he would in an instant suffocate. The best respirator in the world costs nothing but an effort; it is to keep the mouth shut on going into a much cooler atmosphere; this compels it to make the circuit of the head, and in passing upward through the nose and along down the throat, it becomes warm enough by the time it reaches the lungs; just as warm as nature intended, with the incalculable advantage of being introduced into

the lungs in a state of comparative purity. When will we learn nature's method of taking care of herself.

CONCLUDING CHAPTER.

OR,

THE GIST OF THE BOOK.

The prominent ideas presented in the preceding pages are:

Common Consumption of the Lungs, from its inception to within a month or two of death, may be indefinitely arrested or permanently cured.

The cause of Consumption is an imperfect nutrition and an impure blood, arising in all cases from an imperfect digestion and the breathing of an impure atmosphere.

The removal of the cause of any malady, is the first, the essential, the most important step towards its cure; therefore, a pure air and a perfect digestion, are the indispensable requi sites in the successful treatment of any case of consumptive disease.

Substantial food, well digested, is the material out of which blood is made; but it is not converted into perfect blood until it has been exposed to the action of fresh, pure air, drawn into the lungs at every breath; it is therefore a physiological impossibility, that any consumptive can be cured unless he largely breathes a pure atmosphere, and that implies a necessity of being out of doors; for the air within any four walls, must be more or less impure.

Muscular exercise is essential to the removal of useless particles from the system; therefore, the fundamental agency in the cure of consumption, is THE LARGE EMPLOYMENT OF OUT-DOOR ACTIVITIES, involving, as they do—

First. The breathing of a pure atmosphere.

Second. The working off of the useless, decaying, and dead particles of the body.

Third. The securement of a good appetite and a vigorous digestion; which, by imparting substantial strength, increase the ability for exercise; thus the healthful agencies re-act on

one another for mutually invigorating purposes.

It is neither creditable nor humane, in an educated physician, to banish any consumptive applicant from home; nor to abandon him to the questionable benefits of a southern climate, nor to the pretensions of the Consumption-Curer; but on the contary, he should energetically and hopefully undertake the treatment of every case presented to him, with the reasonable expectation of encouraging success, addressing himself——

First. To the amelioration of urgent symptoms.

Second. To securing a perfect digestion, as far as possible by natural agencies, employing medicine as a last resort.

Third. To superintend the out-door activities.

While out-door activities are competent to the cure of Consumption, no patient should be so unwise as to attempt his own restoration, by the adoption of these means: but should

place himself under the implicit guidance of that regular and educated physician nearest him, who most possesses his confidence and respect.

Drunkenness, Consumption, and Syphilis, are diseases of the entire man; every atom of blood is corrupted, every fibre of the body is physically degenerated, and none but the Power which made man first, can make him whole again. All that can be done in either case is to accomplish their arrest; to be made permanent, only at the price of a life-long vigilance. The first moment off the guard, and the pent up whirlwind sweeps all before it.

The only hope of ridding the world of these, its three greatest destroyers, is PREVENTION, never to be attained, except by the diffusion of a general intelligence as to the laws of human health, and the securement of a well educated conscience, which shall enforce their obedience.

The most indelible truths of our nature are the result of convictions founded on personal

observation and experience; and that this book may carry with it a power nothing short of a moral demonstration, it is proposed as a pivot on which the truth or falsity of the main argument shall turn, that the reader, sick or well, who can be delighted by the establishment of any important truth, shall make an experimental test of the fundamental principles here involved, to wit: of the appetizing influences of out-door activities, and spend six or eight hours in roaming through the woods on foot, in fishing, hunting, berrying, or in a horseback ride of equal time, with an interesting and agreeable object ahead; then mark the vigor with which he can dispatch a meal of plain meat and bread; and note too, if there is any abatement of that tonic influence after any number of repetitions; if there is any abatement of flesh or strength or vigor or elasticity of mind or body; but if, on the contrary, there is not a steadiness and a permanancy in these which no drug can ever give? Nay, further, if the worse the weather, the beneficial

influences do not abate, but if any thing rather increase, thus strongly enforcing the truth, which is so uniformly testified to in this volume, that those who derived the highest benefits were those who employed the out-door activities every day, regardless of the weather. Then there comes upon us with its fullest force, the weakness, the folly, the madness of attempting the cure of Consumption, whose cause, immediate, central and most remote, is the want of pure air and a vigorous digestion, by confinement to the house, by impregnated air, and medicinal tonics as an artificial stimulus to appetite and digestion, when judicious out-door activities are their immeasurable superiors; being without their drawbacks, pleasureable to take, and as to their remedial effects, allied to the infallible.

42 IRVING PLACE, N. Y.,
October 23*d*, 1856.

It may be interesting to add, at a date several years later than that of the preceding page, that the treatment of consumption of the lungs, commonly called a "decline," by means of medicated inhalation, that is, by the introduction of the fumes of medicinal substances into the lungs, has so entirely fallen into disuse, as scarcely, at this time, to be ever heard of. No stronger proof could possibly be given of its utter worthlessness as a remedial agent of enduring value.

The case on page two hundred and thirty, abandoned inhalation immediately after the letter mentioned on the next page, having found that the only means of protracting life, consisted in steady travel in the north-west. The severe winters of that region, together with the want of any seasonable accommodations as to bedding and fires, drove him home again, where he died two and a half years later than the letter of page two hundred and thirty-one. As to the writer of the letter on page two hundred and thirty-four, she was in good health three years later. So of the case, seven years later, on page one hundred and forty-four.

Consumption itself, is not in its nature, an incurable disease, but is so, in too many cases unfortunately, for two main reasons.

First: Persons do not yield to the conviction that they have consumption, until it has made such a fearful progress, that nothing short of creative power could rescue from the grave.

Second: In the cases where it is strongly threatened, but not in actual existence, that is, where the lungs have not begun to give way, are as yet entire, but have tubercles within them, to a greater or less extent, with a pulse ranging over eighty beats in a minute, in such cases, the patient, because he has a good appetite, can thump his breast without pain, coughs but little, and expectorates none, or very rarely, can not be made to feel the necessity of those strenuous out-door efforts, which the experienced physician knows are essential to life. The call is, "Give me something to make me a little stronger," or, "Only take away this cough and I will be well as I ever was in my life," and any one who gives the tonic to bolster up the strength, or provides the secret anodyne to control the cough, goes off with the present honors,

only to reap, a little later, the merited but vain execrations from both patient and friends. New remedies are proposed from time to time as efficacious in the cure of consumption, and are greedily taken hold of by the multitudes who are constantly laboring under that dreadful disease; but one by one is gradually dropped and forgotten, to be exhumed from the grave of its inefficiency in a decade or two later; but even while it is dying, a new claimant is proposed with all the appliances of money and of mind, of ingenuity, and of science. But before it can be fully tried, and wanting it to be true, medical men set themselves about accounting for its possibly curative virtues, and forthwith a theory is made out, which seems "so reasonable," that the mind grasps at it with avidity, and declares that it must be true. Millions of pages have been published and scattered broadcast over all civilized nations, showing why cod-liver oil was curative of consumption, that it was a fuel, and that consumption was a fire, which if not supplied with something to burn up, would feed upon the body, thus gradually destroying all the flesh; and all of us being conscious of the

fact that consumption is a gradual wasting away of the flesh, until there is nothing left but skin and bone, we are taken with the plausibility of the thing, and forthwith cod-liver oil is swallowed by the hogshead, many times more horribly nauseous and disgusting though it is than castor oil, so that consumption may feed on the fat of a fish, instead of the flesh of a man. In the mean while, it is expected, that, in some unexplained way, the lungs are to get well and become sound again.

Soon after, chemical research announced that there was a deficiency of lime in the blood of consumptives, that its particles formed a kind of barge, on which nutrient atoms were floated to parts of the body needing sustenance or repair; but if there was no boat to carry it, the nutrient globule could not be conveyed, and it was no wonder that consumptive people "fell off" to skin and bone; hence it was as plain as day, that if boats could be procured, if lime could be artificially provided, a consumptive could not possibly help getting well; so people went to swallowing lime, in the shape of burnt bones powdered. But it was soon discovered

that this would not work; not soon enough, however, for the unfortunate druggists, because in anticipation of selling burnt bones ground to powder, at a thousand per cent over cost price, they sent scavengers in all directions to pick up every bone they saw, whether of hog, horse, hound, or human, and their shelves were soon lumbered with tens of thousands of pounds of burnt bones, in neatly-labelled bottles, with scientific names, to remain there for an age to come.

It was next found that it was not exactly vulgar lime that a consumptive wanted, but a particular kind of lime—lime that had a little phosphorus in it. It was not so certain either whether it was the lime or the phosphorus which was the wanting element; most likely it was the phosphorus itself, or the phosphorus in some other article. To make it all trebly sure, it was determined not only to make the poor consumptive eat lime, but he must eat lime with phosphorus in it; and for fear that it might not be that particular kind of phosphorus, it was concluded to add to the mixture a variety of things which had phosphorus in them, and thus

was the birth of the latest cure, the "Phos-phites of lime and soda and iron."

A modification of the cod-liver oil theory is the brandy practice. It came about in this wise. Cod-liver oil is hard to take—brandy is n't; and as both are almost pure carbon, the latter is the more available; and if it is good in one way, it is good in another; if it is valuable inside, it must be valuable out. These opinions seemed "reasonable," and the practice was adopted in New-York in cases of consumption, certificates published of the success of the same, and editorials purchased in corroboration of inhaling the fumes of alcohol, of bathing in it, and of drinking it largely at each meal; thus the patient was made to breathe, soak, and swallow brandy. However, brandy is not always insisted upon by the stimulating advocates; some swill beer, or porter, or ale; others luxuriate in milk punch, odoriferous gin, and Bourbon or Irish whisky. But in all these remedies the alcohol is the agent relied upon, with rarely indeed any other result, and never to the author's knowledge, than that the patient lived a fictitious life, walked unconsciously over a magazine of

powder, to perish in an unexpected moment; and more, perished while hoping for a speedy restoration; for a point is arrived at in such treatment, as in the last stages of an inveterate toper, when the alcohol ceases to stimulate, and the patient sinks rapidly into a remediless grave. Stimulants, in whatever form, are only excusable under circumstances of temporary expediency, as in sudden sinkings, or when taken only at meal-times, so that the strength of it may be expended, not on the brain or nervous system, but on the stomach, in giving it a transient power of digestion, the more perfectly to extract from the food eaten the elements of renovation and life, but not before meals, for then its power is spent in exciting an appetite for more food than would otherwise be eaten, when already the stomach wants strength to properly digest what the ungoaded appetite would take. But even under these circumstances, stimulants are not to be considered the main, the permanent, or the essential means of cure; they are only to give time for bringing to bear such remedies as are actually curative, or have the power to arrest the further progress of the dis

ease, and raise the patient to life and health again.

All previous medicinal remedies for the cure of consumption, of whatever name or note, have lost their reputation, have fallen into disuse one by one as soon, if not before, some "new cure" is proposed, to be run after with as much greediness as any of its predecessors. Some medicinal cure may be found hereafter for the dreaded disease; but it is not at all likely to be obtained, for no medicine can give breath or make lungs. A consumptive dies because, for a long time previous, he has not been taking breath enough for the wants of the system; that is, he has not been taking enough air into the lungs to purify the blood and to give it life. The simple reason why enough air is not had is, there is not room in the lungs to hold it; not only because part of the lungs have decayed away, but another portion is preöccupied by solid rounded lumps called tubercles; and it is plain, that if the lungs are largely filled with these, they can receive just that much less of air. But if any portion of the lungs has decayed away, in a case of actual consumption, that portion can not be

replaced by any thing short of creative power, no more than a lost finger or limb can be reproduced; and if there be a solid particle, or thousands of them, fungus and yet foreign, it is difficult to imagine how they can be removed by any thing that can be introduced there or into the stomach. All that is to be hoped for in any case is, to arrest the decay, and to prevent further increase of tubercles as to size, numbers, or softening; for increase as to either is certain death, unless arrested.

That when the lungs have begun to decay away by consumption, that decay is arrested spontaneously, and that the person ever after may remain in good health, no intelligent anatomist or physiologist will perhaps deny, since the lungs of most persons over forty, who have died of any disease or casualty, present ocular evidence of such arrested decay, while the immense majority of consumptives die under thirty-five years of age, leaving us to infer that very many others who had passed forty, and had not died of consumption, had been on the road to consumption, were actually under its influence, but that circumstances arrested its pro-

gress. The inquiring will not fail to find, in every case, that these circumstances embraced a prompt and radical change of habits of life or bodily condition, that bodily condition being one of these, pregnancy or corpulency, both being physical and essentially the same, and corpulent people do not die of consumption, for the increase of the volume of the abdomen presses upwards against the lungs, thus bringing the two sides of any existing cavity or sore in contact, which will inevitably be followed by healing, if the general health is kept good; just as a gash in the finger will heal soon, if the sides are kept pressed together, and will not heal unless thus kept together. It has just been said, that corpulent persons do not die of consumption. Such persons are always observed to walk erect; in fact, they lean backwards; a line from the point of the shoulder-blade would fall several inches behind the heel. Such persons stand in the same way; their favorite posture is with the hands behind them; one hand is held in the other, for they have instinctively found that thus they can walk or stand easier, and both without an effort. This

erect position favors an easier and a deeper breathing; the lungs are more fully distended, and being so, they, as well as the abdomen, promote the more perfect and close contact of the sides of any cavity or sore that may be in the lungs. Such postures of body, therefore, all ought to strive for, whether in sitting, standing, or walking.

Persons cured of consumption by a change of bodily condition, if they do not owe it to an increase in the bulk of the abdomen, owe it to a change to some other disease, or to some permanent eruption or running sore; and the sudden healing up of such sore, or driving in of such an eruption, will be certainly followed with a return of the consumptive malady.

If a person has not been cured of a consumption by some great change of bodily condition, of the characters just named, it will be found to have arisen from some great and abrupt change in the habits of life, some of which will be named, without expressing the reason, for this has been mainly done in the preceding pages.

Going to sea on a several years' voyage, doing ship duty, or something equal to it; inces-

sant horseback travel, day in and day out, inevitably; driving a trotting horse or pair several hours daily, the position of the arms, and the incessant motion of their hinges, favoring the protrusion and development of the chest, which allows the fresh air of every step, to crowd in and down upon the lungs, without meet or hindrance; a month's driving will, in some instances, increase the capacity of the chest ten or fifteen cubic inches; going on a farm, and performing a regular hand's work; sawing wood in the manner of the street-sawyers who work by the day, not by the job, moving with the greatest deliberation; going on hunting excursions, camping out for months together; driving milk, or butcher's or grocery carts over the stones of the city streets, always going fast; riding or walking on collecting tours or agencies; all these embodying the same general principle, the constant, steady, and large consumption of pure, fresh out-door air, regardless of the weather, in order that it shall be constant and continuous. Consumption, like fire, is a progressive thing. To supply water to the latter, and air to the former, only on alternate days,

could not but result in certain and hopeless destruction. If any portion, say one tenth of a man's lungs is destroyed, and that destruction is arrested, he can have as good health as ever, although the lost lungs can not be replaced, because the lungs are compensative, are distensible. If an inch be taken from a foot of india-rubber line, it can be made to stretch a foot again. If one horse from a team of half a dozen dies, the remaining five may be made to draw the wagon home. So if a part of a lung is destroyed, the remainder is capable, by practice, of being made to receive the usual and natural amount of air for the wants of the system, so as to enable the whole machinery to work well. This is what is called the "cure of consumption." How much of lung substance, or power, or capacity, is lost in any given case, can be measured with as much certainty and accuracy as the contents of a box or barrel. How to increase the working capacity permanently, so that the remainder may be made to do the work of the whole without a strain, is the province of the physician, the general princi-

ples by which it is done having been already referred to.

In all cases of consumption cured by artificial means, that is, not spontaneous, two things are essential.

First. The general health must be kept in good condition, so that the food may be thoroughly and well digested, so as to make materials for a pure blood. To do this, remedial means must be judiciously employed, in addition to the rules and requirements of general hygiene.

Second. Exercise must be freely taken, as incessantly as eating, in order to work off the impure blood, which is the immediate cause of the tubercular, the consumptive condition; and that exercise must be taken in the open air, because it is impossible to make pure blood out of the most nutritious and best-digested food in the world, without pure fresh air comes largely in contact with it; and without this contact with pure fresh air, the making of one drop of health, life-giving blood is an absolute impossibility. So that the reader can clearly see how it is that medicine can never cure consumption. All that it can possibly accomplish is, to pave the way,

to make preparation for the cure; but the cure itself is in the breathing of a pure fresh air, and without that, a consumptive will always die, whatever temporary deceptions may be created by the administration of medicine.

In cases where running sores arise, and a consumptive gets well, it is in this wise: It is a law of nature, that any running sore is the outlet of the impurities of the system; thus the blood is unloaded, or in vulgar though incorrect phrase, the "bad blood runs off," and by doing so, the general system becomes healthy, and that health enables the person to exercise and go out.

In the case of a pregnant woman who gets well of consumptive symptoms, it is a law of nature that all her powers shall be summoned to the production of the new being; and to this end there is a spontaneous increase of general health, giving increased strength and ability to exercise and go out of doors.

In every light, therefore, in which the cure of consumption is contemplated, the two attendants are inseparable and are always present—a vigorous digestion to give strength, with materials for a pure blood, and the expenditure of

that strength in enabling the patient not only to take more exercise, in order to work off the bad blood already in the system, but also to enable him to go out of doors, and breathe that pure air which is essential to the making of every drop of living blood, to say nothing of the agency which this same pure air has in withdrawing from the old blood a very large share of its impurities; so that while pure air helps materially to deprive the old blood of its impurities, it at the same time does what no other ag nt in the wide universe can do, for its contact in the lungs with what is so soon to become new blood is essential to its becoming blood at all. To try therefore to get well of consumption, without a large breathing every day of pure, fresh, out-door air, is as hopeless as an attempt to level the Andes, or to blot out the sun.

In cases where there are tubercular deposits, which preöccupy the room in the lungs to a certain extent, so that the needed amount of air can not get into them, the cure is effected mainly by circumstances occurring tending to increase the development of the lungs, which are little

air-cells, and by being distended by forcible in-breathings, each air-cell presses up against the tubercle next it, not only preventing that tubercle's increase in size, but to some extent diminishing its size, by the law of pressure and absorption; thus the tubercle is made permanently innocuous. Hence it is, that in almost any man of forty or over, in good health, killed suddenly, there will be found these harmless tubercles. Let it be remembered here, that the mere existence of a few tubercles in the lungs is no "sign of consumption," for if the person maintains general good health by means of temperance and industry and rational personal habits, these tubercles will never hurt him, any more than powder will "go off" without fire is applied. But the softening of tubercles is like the application of a match to a magazine; that softening coming on always by whatever produces a weakly or sickly condition of the body for months together, or by bad colds long continued, or so frequently repeated, although slight, as that one cold terminates in another. Antagonistic of such conditions of the system are the forms of exercise already referred

to. Next best to these, and oftenest applicable in cities, where such forms are impracticable, is a well-arranged and well-ordered gymnasium, under the personal eye of a conscientious and thorough physiologist. If, however, the lungs are in an actual state of decay, or if there is a great tendency to bleeding in any shape or form, from an extensive tubercular deposit, or from any other cause, our belief is that gymnastic exercises are useless, hurtful, and hazardous.

The author would fail of duty done, to close without saying, that whenever the lungs have once begun to decay, even to a small extent, with a pulse usually over ninety beats in a minute, death is the rule; recovery, the rare exception. When the lungs are thickly studded with tubercles, with a pulse usually over ninety beats in a minute, death is the more certain. If a girl is in her teens, seasons interrupted or unnatural, pulse over ninety, with blood in any shape, or in any quantity in the saliva, daily, or every now and then, or even for several occasions, recovery is a very rare occurrence, and is never to be hoped for, unless a good digestion is secured, and the out-door activities are pushed

with a persistent and determined courage. But we repeat it with an emphasis, believing that it will be to the saving of the life of some whom the author may never see, that failures of cure in these and other cases are not from the incurable nature of the disease in itself, but from the impossibility of making persons feel the importance, sufficiently early, of using a most encouragingly certain means of cure, such as has been already repeatedly detailed.

ADDITIONS.

In our own time a variety of reported cures for Consumption have been presented, have lived their hour and passed away; thus has it been for centuries, showing beyond all dispute, there is as yet no medicine which has any effect whatever in restoring to health the unfortunate victims of the dreaded scourge.

As one person out of six dies of consumptive disease, every man, woman, and child is more or less directly interested in every thing having a practical bearing in reference to a malady which has already carried millions to the grave, and is destined to destroy millions more. In reading the public papers, the impression might be made on the unthinking that consumption was more easily cured than any other human ailment. The confident manner in which it is announced that this, that, and the other remedy

is uniformly successful, and that all that is necessary to procure the same, is to forward a three-cent postage-stamp, and the way is open to a prompt, permanent, and radical restoration, does mislead thousands every year. Cod liver oil, naphtha, medicated inhalation, Bourbon whisky; the injection of solutions of nitrate of silver, the ruthless excision of the tonsils, and pectorals and syrups and troches and a multitude of other remedies, safe, sure, and infallible, have been proposed from time to time, have had their fashion and their butterfly hour; but the people still continue to die of the dreaded disease; not as before, but more numerously than ever, proving beyond contradiction, that there is no curative power in any of them. And the very avidity with which any new remedy is seized upon and published to the world, is evidence enough, that the great want is still unsupplied. When it is remembered that consumption is a general destruction of the substance of the lungs, it ought to be felt, even by the unreflecting, that in reality, there can be no absolute cure; because, when a portion of the lung is once destroyed, its reproduction is

as impossible as that of a lost limb or finger. In a literal sense, then, consumption is absolutely incurable. At the same time a man may, from various causes, lose a part of his lungs, and yet have that decay arrested, and live in reasonable health for many years afterward. Anatomists say that in examining the lungs of those who have died after the age of forty-five, it is a very common thing to notice evidences of a partial destruction of the lungs, and their subsequent healing up, without the subjects of this process ever having had a suspicion in life, that any thing was the matter with his lungs. It follows then, that being cured of consumption, in this restricted sense, is an event of every day occurrence. But such a conclusion brings with it very little comfort when connected with that other observation, that such "cures" are always spontaneous, and are never clearly traceable to any drug swallowed, to any gas or atmosphere inhaled, or to any surgical operation. The reputation which successive vaunted remedies have obtained, has been owing to several causes, each of which is particularly calculated to foster a deception; and

First. Consumption is a disease which, in its nature, is of a very flattering character, in that it generally, except in its very last stages, is not attended with any pain; the appetite is good, and the intellect clear; the malady itself is in the lungs, which, being scantily supplied with nerves, have very little feeling.

Second. The seeds of consumption, as previously explained, are little, hard, roundish substances, called "tubercles," scattered through the lungs in little patches, more or less extensive, which patches ripen, as it were, at different times, as apples on a tree or berries on a bush; this ripening, however, is rather a rottening process; it is the softening of the tubercles, whereby the lungs become disorganized and destroyed, and are in this state spit out of the mouth, in the shape of a thick, yellowish matter. While this softening process is going on, and until the matter is wholly expectorated, the patient does not "feel so well;" there is fever, and there is cough, with a variety of other discomforts. But when the matter of that "patch" is all expectorated, and the lungs are relieved of the discomfort of its presence;

the elasticity of the system returns; the cough greatly abates, and in some cases disappears almost entirely, and the patient expresses himself as feeling "almost as well as I ever did in my life." This better feeling continues until another patch ripens, rots, and is spit away; the process going on, in repetitions, from time to time, until such a large portion of the lungs has been destroyed, that enough is not left to live upon, and death closes the scene. Hence it is, that the history of almost every consumptive, is that of being better and worse, through the whole course of its progress; which averages about two years. These "spells" of being "worse" are uniformly attributed to having "taken a little cold." The patient, too willing to be deceived, takes comfort in the reflection, that if he had not taken that last cold, he would still have gotten better; and summoning up a new resolution and energy, determines that he will be more careful against taking cold another time; and as a means of so doing, "bundles up" more; is more guarded as to "exposures;" that is, goes out less, hugs the stove more, leaves less frequently his cozy corner at the

fire; not taking note of the fact for a long time that he "takes cold," as he calls it, in spite of all his efforts, and finally settles down in the declaration that the "least thing in the world gives me a cold;" or there is a positive inability to determine how he got his last cold; and then begins to think that it came on of itself; the true state of the case being that it is simply the natural progress of the disease; that "taking cold" had nothing to do with these repeated back sets. And there is a failure also to observe, that during this "bundling up," this fearfulness of "exposures," involving closer and closer confinement to the house, the "colds" come more frequently, last longer and longer, until one runs into another, and there is a continued cold; which means in reality, that the destructive process is now going on steadily, and with it there is a more and more harassing cough, a greater and greater thinning of flesh, a more and more distressing shortness of breath, more drenching night-sweats, more consuming fevers, with a weakness, approaching the utter helplessness of a new-born child.

But suppose in the earlier stages of the mal-

ady, when perhaps the first or second or third "patch" had pretty much softened and the patient was beginning to spit it away, a particular remedy was administered; the improvement which always follows the riddance of the yellow matter, which is really rotted lungs, is attributed to the last thing taken or done; it may be a week, a month, or a year before another "patch" of tubercles begins to soften; meanwhile considerable health is enjoyed, and the patient, quite willing to believe that he has been cured of consumption, speaks of the remedy used, in the most extravagant terms; and with a kind of gratitude gives his "certificate" of its value in his own case; and in a month it has been read by millions. Hence the multitude of fallacious "cures," so called, which flood the country.

But suppose there had been but a single "patch of tubercles," and nothing had been done; but there was the usual cough, expectoration, night-sweats, etc., and then an ultimate restoration to health, the whole thing is dismissed with the remark that it was only a very bad cold.

There is, perhaps, not a man living who is troubled with "a very bad cough," who has not been advised to try a multitude of remedies, with two stereotype statements, "It can do you no harm, if it does you no good;" and "It cured a much worse case than yours."

But there are literally millions who, after hopefully trying the remedy, have been doomed to the sad experience and admission, that "however much others may have been benefited, no benefit has resulted in my case."

But as there are persons who have labored under the more common and unequivocal symptoms of consumption, such as cough, spitting blood, expectoration of yellow matter, night sweats and swollen ankles, and yet have recovered and lived in good health a quarter of a century afterward, it will be instructive to note, what are the circumstances in common, in all these well authenticated cases; then we may conclude, that if in any given case these circumstances can be brought about, similar favorable and triumphant results may be reasonably anticipated. Let the reader turn to the cases of apparent cure already

noted; to wit: Dr. Norcom's case, (page 102;) another reported in a British medical periodical, in 1854, and reproduced in this volume, (page 113,) and others following. To these may be added the case of General Andrew Jackson. It was stated in the public prints at the time of his death, that there was every indication that one fourth of the lungs had been destroyed by disease twenty-five years before. To these may be added a case which came under the author's notice five years ago.

Volume 15, case 2097, was an Englishman; tall, slim, nervous temperament, a traveling clock-mender and tinker. The yellow matter in the air-passages was so abundant that he could bring up a mouthful at any time, with a kind of gulp, or hem. This seemed to be a case so utterly hopeless in all its aspects, and one wherein no medicine whatever seemed to be appropriate, the only advice which was at the same time applicable and possible to him, (as he was extremely poor,) was that he should eat regularly and as much as possible, and spend his waking existence in some very active exercise out of doors. He was advised to cough as little

as possible, to make every effort to repress it, to endeavor to get rid of the "phlegm" by hemming; but that whenever it was not possible to restrain a cough, to throw the head back and cough out at an angle of about forty-five degrees, so as to jar and strain the lungs as little as possible, and thus bring away the phlegm more easily, as would be the case when it came up much nearer in a straight line, than at a right angle, as in ordinary coughing, or at a more acute angle still, when the chin is bent down as it usually is, in the act of coughing. This man was so very poor, (and the winter was approaching,) that it was considered necessary to furnish him with some clothing. But he was well informed; had seen and thought for himself as to the nature and philosophy of his malady; so that there was a sufficient inducement to explain to him the reasons for the particular courses advised; these he seemed to comprehend and appropriate. Still, there was no expectation of ever seeing him again in life. A year later he was heard from through a third person, who spoke of him as the "crazy carrier." Adopting the suggestions made to him,

he at once procured the situation of meeting the express railroad train at a certain point, receiving the daily newspapers, which had to be carried on foot to a post-office two or three miles distant. At first he was too weak to walk fast; but by great patience he had increased his gait, until at the time of his reporting, he was literally running five miles every twenty-four hours; never missing a day. On one occasion, when the thermometer was hovering about zero, he was seen without gloves or overcoat, his hat thrown back, so as to expose the whole forehead, papers under arm, and at a long, loping gait, "making time" for the post-office; this furnished the occasion for giving the sobriquet of the "crazy carrier." Later on he came to pay a fee for the first consultation, and five years from the first interview, he called to say that he was well; that he had supported his old father and mother during the interval; that he was drafted, and wanted to know what could be done for him in the way of securing an exemption. On a careful examination, there was found no physical ground for excusing him from serving as a soldier; and all

that could be conscientiously done for him, was to give a certificate that he had been under treatment within a few years for consumptive disease.

In all the cases of apparent restoration from consumptive symptoms above referred to, there is one element, always present, never absent; it is no pill or potion, no drug or "simple" remedy; no syrup nor "pectoral;" no lozenge, no surgeon's operation, nothing physical; but something as impalpable as thin air; it is simply force of will; an unconquerable determination to live above disease; to conquer it or to die in the attempt. Moral courage, then, is at the very foundation of all effective treatment for consumption of the lungs; and is worth a thousand times more than any "dose" ever compounded by the apothecary; or than any "operation," which the most skillful surgeon in existence can boast of. Without this quality of the mind, invincible determination, all artificial means for the cure of consumption in its ordinary course, have seemed to be utterly unavailing. It must not be that fitful bravery which leads a man, in the excitement of the

moment, to march up to the cannon's mouth, at the instant of its belching forth flame, and fire, and death; but it must be a persistent resolution, a "chronic" courage, which remains at the highest point all the time; day in and day out; reaching through days and weeks and months, and even years if need be. A courage which can at a moment's warning leave the cozy fireside and brave the fiercest winds of winter, which can any day abandon the comforts and happiness of home, and undertake long journeys on horseback or foot, through snow and frost and freezing rains; sleeping in comfortless cabins, or by the wayside; living on the coarsest fare of "squatter" poverty, or depending on the precarious "bringing-down" of the hunter's rifle; the men who can do these things, and do them with such a will as to make them as mere pastimes, these are the men who can, and who often do, survive for long years, the fierce attacks of consumptive disease, and all honor be to them, for such high types of heroism!

But in this connection let it be borne in mind that such moral courage, such force of

character, is not found oftener than once in a thousand, and that this being so, the man who has actual consumption may consider himself inevitably doomed, except in the very rarest number of cases; and that they are wisest who make a systematic effort to live in such a way, as not to fall into the grasp of so remorseless a disease themselves; and to do all that is possible, by judicious counsel and unceasing watchfulness, to preserve their children, and others who may be under them, from those habits of life which invite so fell a malady.

Climate for Consumptives.

It has been a fashion of many years' standing, to go to the South, when the lungs seemed to be affected; or to take long journeys by sea. Of late years another "notion" seems to have taken hold of the public mind, to wit, that Minnesota, the great North-West, is best adapted toward recovering a man from consumption; and now, the stream of consumptive travelers is in that direction, instead of toward the sunny South, to Cuba, Madeira, and other localities

This change of sentiment originated in loose

newspaper statements, that very few persons were noticed to have died of consumption in Minnesota. Similar statements have been made as to California, and for the very same reasons; both countries are comparatively new; few, other than the hardy, "settled" in them, and for obvious reasons the statistics on the subject must have been very imperfectly gathered. California is in a measure inaccessible, by reason of its distance. Havana and other warmer latitudes require more means than the multitude can command; hence, the great army moves toward the "North-West," with most discouraging results. The ablest resident physician at St. Paul, the chief town of Minnesota, says that two thirds of the consumptives who reach that point, die there; and it is his frank and honorable habit to advise visitors to leave there as soon as possible. The air is indeed pure, and still, and dry, having a uniform temperature in mid-winter; but whether from its great severity, or its rarefied character, or from its possessing some stranger ingredient, not yet detected, or whether from other causes, the fact remains the same, that two thirds of all who go

to Minnesota for the removal of consumptive symptoms, perish there; and how many, soon after their return to their own homes, there are no means for ascertaining. But it is suggestive to note in the cases given in the preceding pages, that they were from all latitudes, from Canada to Cuba, leaving us to fall back on the great comprehensive fact, that the essential, the fundamental, the all-controlling agency in the arrest of any case of consumptive disease, and a return to reasonable health for any considerable time, is an active, courageous, and hopeful out-door life, in all weathers and in any latitude, with some rousing motive, other than regaining the health, beckoning them onward, to do and to dare.

Although the main elements in the cure of consumption are first in nature, and second in the moral courage of the individual who is suffering from its ravages, it is of the utmost importance in every case where the disease is supposed to exist, to consult a physician, not only to decide whether the disease is actually present, but to use those means which are best calculated to aid nature in her efforts at restora-

tion. In other words, it is always important to keep the appetite and digestion in a healthy condition; it is not merely requisite to have a vigorous appetite, for there are many who can eat a great deal and have pleasure in so doing, but the powers of digestion are so weak and imperfect, that enough nutriment is not extracted from the heartiest meal to afford strength for the performance of the most common duties, or to take any efficient exercise. The amount of strength derived from what has been eaten, does not depend on the quantity of food which has been taken into the stomach, but upon the perfection with which the food has been digested. An ounce of food thoroughly digested affords more nutriment, imparts more vigor, than a pound, upon which the stomach but feebly acts. It is a very common complaint: "I eat heartily, and relish my food, but it does not seem to strengthen me." Many such cases could be remedied if a quarter as much food were eaten and as much digestive power were expended on this as would have been on a fuller meal; for then a better quality of blood would

have been made, and out of that comes strength, which is the power to exercise.

A man may have ever so much moral courage to exercise, but if he has not the physical power, he must die; and that power must come from hearty food, well digested. If the great glands, the manufactories of the system, are not kept in working order, that is, if the skin is dry, if the bowels are sluggish, if the liver is torpid, all of which are indicated by a "poor appetite," the strength will decline, because there is no good digestion, and the health and life will waste away. But the skillful physician can, by proper medicines, in a great many cases, bring the skin to its soft, moist, natural constitution. He can by medicines regulate the bowels; he can by the virtues of his art regulate the action of the liver, and thus in this indirect manner do a great deal toward the cure of consumption by enabling the patient to obtain strength to use nature's great remedy, to wit, vigorous, continuous, and persistent out-door activities. Then again, a consumptive person is liable to a great variety of accidents, to attacks of acute diseases, such as diarrhea, dysentery,

fever, inflammation of the lungs, and other similar and rapidly debilitating maladies. Prompt medical attention to these, by arresting them at once, saves valuable time and saves greatly the strength of the patient, the husbanding of which all the time, is of fundamental importance. Hence every person having consumptive symptoms should be constantly under the supervision of a conscientious and skillful physician, to watch his symptoms, to guard him from improprieties in eating, sleeping, and taking exercise, and, in fact, in all the habits of life, with this additional advantage—a relief from the feeling of responsibility, which is enough in some cases to operate as an incubus both on body and mind, thus greatly retarding the progress toward health.

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